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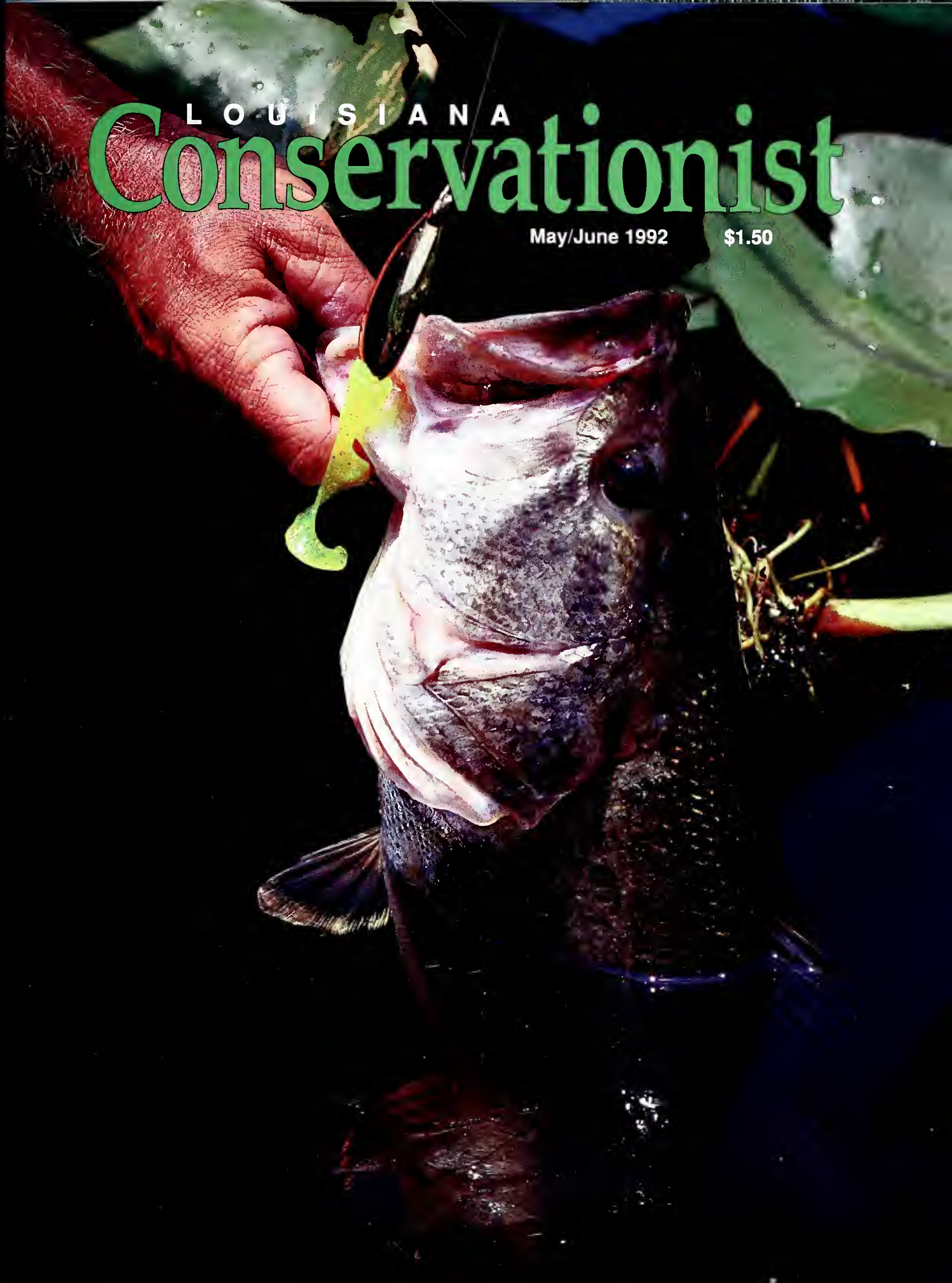

Joe L. Herring

Comment

May is traditionally the beginning of the recreational boating season in Louisiana. It is the time when thoughts turn to water skiing, swimming parties, increased fishing activity or simply cruising the state's prolific waterways. The boats involved cover the entire spectrum from canoes to large yachts.

In fact, we now have 291,000 boats registered in Louisiana. Keep in mind that the registration total only reflects the number of boats powered by a motor of some kind. It does not include canoes, small sailboats, or rowboats. (Yes, the newly popular "jet skis," or personal watercraft, are motorboats and must be registered.)

What the numbers really mean is that most waterways have become quite crowded, and that poses a potential for trouble unless we all accept the necessity for sharing the water with other boats and other boaters.

I am happy to report that Louisiana has experienced a decrease in the number of boating accidents, injuries and fatalities in recent years. In 1988, we recorded 129 accidents, 100 injuries and 60 fatalities. In 1991, those figures had fallen to 104 accidents, 81 injuries and 29 fatalities.

This success is due primarily to the intensive efforts of the department's boating education instructors, the Coast Guard Auxiliary and the Power Squadron in providing basic boating training courses for the public, and to the ongoing efforts of our Wildlife Enforcement Agents in regulating hazardous activity on the water.

Alcohol continues to be one of our most serious problems affecting boating on public waterways. The other, equally serious, is a lack of courtesy and consideration for the rights of other boaters. The first invariably contributes to the second, and when the two are combined, tragedy is almost inevitable.

The department will continue its concentrated efforts to intercept boaters under the influence of alcohol, and to apprehend those who create hazardous boating conditions by operating their boats, including personal watercraft, in an irresponsible manner. This includes "shooting the wake" of a moving vessel, high speeds on crowded waterways, creating excessive wakes near other boats and camps and similar discourteous and dangerous acts.

Our Education Section will continue to offer free basic boating courses to our citizens. If you, or members of your family, have not taken such a course, contact your nearest Wildlife and Fisheries office. More than ever before, we must all know and follow the basic rules of responsible boating.

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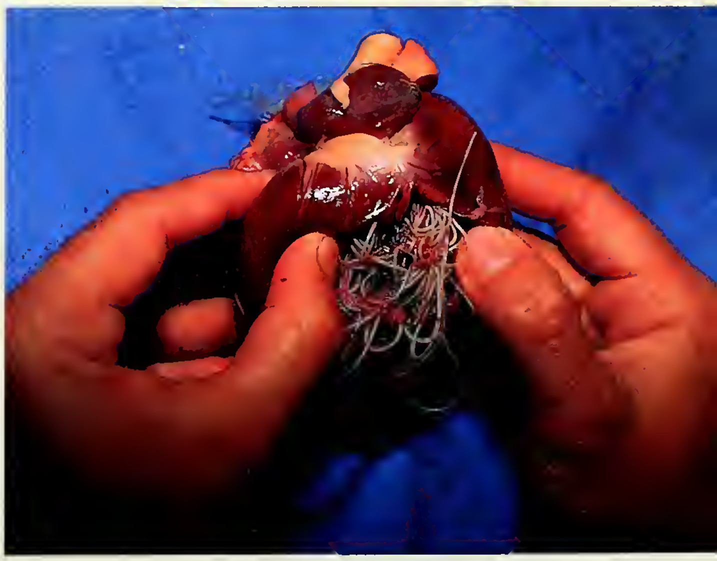


Caney Lake's BIG BASS EXPLOSION

Photo by Janice Little

BY GLYNN HARRIS

Thanks to judicious fisheries management Caney Lake has produced some of Louisiana's biggest largemouth bass.

It was back in 1968 when funds were first appropriated to survey the area that would one day accommodate 5,000-acre Caney Creek Reservoir. Anglers were already chomping at the bit to get in on the top-notch fishing the lake was supposed to provide in a few short years.

That few short years turned into a couple of long decades. A political tug-of-war developed with plans for the Jackson Parish lake shelved for almost 20 years. It was not until 1986 that Caney Creek Reservoir, or Caney Lake as it is more commonly known, was completed and 1989 before water began trickling over the spillway for the first time.

"Okay, so we had to wait 20 years; now let the good fishing begin," was the attitude of many area anglers who had waited and waited for their home lake to live up to its billing.

It was not to be. There were just no bass of any size in Caney Lake. Oh, the lake had plenty of bass, but most were skinny little fellows, 10 inches long and smaller. Except for the occasional big bass that were already in ponds flooded by the lake, there was no evidence that a healthy, growing population of bass occupied Caney Lake.

Some 950,000 Florida bass fingerlings were released in the lake between 1986 and 1990 with funding for the release and a simultaneous research project provided by Wallop-Breaux funds. As the result of the research project, led by Louisiana Department of Wildlife and Fisheries biologist Janice Little, Caney Lake's bass problem was isolated.

"To put it simply," Little explained, "the bass were starving to death on Caney. There was no population of threadfin shad in the lake and the cover was so thick that small bream were able to hide and escape the bass. We found these bass relying on insects and the larvae of mosquitos and midge flies as their primary food source, and fish can't grow on insects alone. It's sort of like us trying to live on bread crumbs. We can't do it, and fish can't either."

Little found that Caney Lake was chock full of bass, actually 146 per acre from one survey when the norm on most lakes is 10 to 15 bass.

"This extremely high population of bass was coupled with a very high black crappie count per acre - 562 fish. These fish have to eat, too, so as you can see, Caney had far too many small fish for the available food supply," Little explained. Little's project was completed less than two years ago.

What is the situation on Caney Lake today? In a word, the population of big bass has EXPLODED. In 1991 alone, over a dozen bass weighing in excess of 10 pounds were brought to the scales. Caney Lake bass unofficially hold down four of the top five spots in the state records.

Grambling angler David Ferguson landed a 12.87 pounder in June, 1991, and a month later, Rick Carter of Farmerville brought in a bass that weighed 13.06 pounds. In March, 17-year-old Brian Davis caught a 14-pound, 5 7/8-ounce largemouth that set the state record. Earlier the same week, Joe Shook of Quitman landed a 13.26-pounder. Davis' fish surpassed Dr. Tracy Smith's 13-6 pound bass taken from Lake D'Arbonne in March, 1990, as the state record.

Why the drastic change in so short a time? There are several factors to be considered.

"The trophy bass that began showing up on Caney last year have emerged out of the pack of the Florida stocking we made in 1986. They attained the size to be able to utilize larger forage such as gizzard shad and bream, and they've just exploded," Little said.

Another addition to the lake promises to virtually solve the forage problem for the smaller predator fish, such as bass and crappie. That was the introduction of threadfin shad to the lake in mid-1990.

"We acquired 30,000 adult threadfins from Arkansas in May, 1990, and released them into Caney. Today, the lake is full of threadfins; they have spawned and this one stocking of shad was all we needed. This will help our bass move up from one level to the next because the forage is now there for them," said Little.

Another factor that will keep Caney Lake at the forefront in producing trophy bass is its inclusion in the state's Black Bass Management Plan. Designated as a quality lake, Caney operates under a daily limit of eight fish and a 14 to 17-inch slot. The daily limit may contain no more than four fish over the slot size.

As if Caney Lake hadn't had enough problems to overcome, yet another potential disaster, hydrilla, crept into the lake toward the end of the last decade. On large, deep lakes such as Toledo Bend and Sam Rayburn, hydrilla is a blessing in that it provides deep water cover for bass. On 5,000-acre Caney Lake, however, hydrilla is a potential lake

Photo courtesy of Brown's Landing

Rick Carter shows off a 13.06-pound largemouth he caught in Caney Lake, one of Louisiana's seven quality lakes.

Electrofishing on Caney Lake is conducted to gather largemouth bass for analysis.

Photo by Janice Little

destroyer, says Little.

"I don't know if someone brought it in intentionally or if it was accidentally introduced but it posed a very serious threat to the lake," Little explained. "Probably more than half the lake is less than 20 feet deep and it's a very clear lake. Hydrilla can grow in water up to 20 feet deep if there is sufficient sunlight. I imagine that at least 3,000 of the lake's 5,000 acres would eventually have become completely choked by hydrilla.

'As soon as we determined it was there and spreading fast, we began chemically treating the hydrilla beds. Fortunately, we have been able to achieve about a 95 percent success rate in killing the hydrilla and we're still treating what is left. It had covered almost 400 acres of the lake when we found it and began our treatment of it," she added.

The majority of the larger bass taken from Caney have come from mid-lake areas around brush covered humps and ridges lying adjacent to deeper water. Carter was fishing just such an area when his lake record bass hit.

"I was fishing a brushy ridge that dropped off from 17 feet to 25 feet in depth. Since so many of the big fish had been caught on deep diving crankbaits, I figured maybe they needed to see something different, so I decided to fish a jig. I felt the pick-up at about the 20-foot depth, and when I set the hook, I thought I'd hooked a log. The bass jumped completely out of the water - I've never seen a sight like that," Carter recalled.

Ferguson had a similar story to tell about his 12.87-pounder he hooked on a June night under a full moon.

"If you never saw a bass weighing almost 13 pounds come out of the water, gills flared in the moonlight, then you've missed something," said Ferguson. His bass hit a plastic worm on yet another brush covered hump.

A favorite method of many Caney bass anglers is to fish a deep diving crankbait around and through the brush. Mann's 20+ or any other similar lures capable of digging deep have caught dozens of trophy bass on Caney Lake.

A new state record could very possibly be hoisted from Caney Lake again.

"It's just a matter of time. The lake hasn't peaked and won't for another two to three years," predicted Little. "The best is yet to come for Caney Lake." □

RECORD BASS FROM CANEY LAKE

BY HOWARD ARCENEAUX

In the early hours of Sunday, March 8, Brian Davis of Eros was fishing with his brother, Steven, and friend Carl Telano on Caney Lake.

Brian, a 17-year-old Ouachita High School Junior, was casually flipping a six-inch tequila sunrise worm in about 12 feet of water. The trio was getting ready to do some crappie fishing when Brian suddenly felt a tug on his line. He missed the fish, but threw his lure back to the same spot. He felt another bump, then firmly set the hook into Louisiana's state fishing record book with a 14-pound, 5 7/8-ounce largemouth bass.

After Brian battled the large fish to the boat, Steven pulled it in and put it into the live well. The excited teen-agers took off and when they got to Telano's home, they weighed the fish on a bathroom scale. It registered roughly 15 pounds.

They put the bass in some water and called the Louisiana Department of Wildlife and Fisheries' office in Monroe at about 2:30 a.m. Fisheries Biologist Mike Wood brought a holding tank to keep it alive.

Davis' bass will be kept on permanent display in a 700-gallon aquarium at Brown's Landing on Caney Lake. Davis said instead of having the actual fish mounted, he will accept a fiberglass replica to commemorate the memorable event.

Davis' fish is just the latest lunker largemouth to be pulled from Louisiana waters. The previous state bass record was 13-6, caught last March by Dr. Tracy Smith of Ruston on Lake D'Arbonne.

At least seven bass exceeding 11 pounds have been taken from Caney Lake in the past year including a 13.26-pounder landed by Joe Shook of Quitman a few days before Davis' catch. Shook's bass was a heavily gravid (eggs matured-ready to spawn) female and was released back into the lake after certification. Caney has now produced the first, third, fourth and fifth place positions for bass in the state record book.

A private lake in West Monroe has produced two record-sized fish in the past 13 months. One caught in 1991 weighed 13-10 and another caught in February weighed 14-9. However, the Louisiana Outdoor Writers' Association, which certifies state records, only recognizes fish caught in public waters. The LOWA is in the process of establishing a category for fish taken from private waters.

LDWF Fisheries Biologist Janice Little predicts Davis' record will eventually be broken. There are several factors for the recent surge in large largemouths.

In 1986, the LDWF stocked Florida bass in a number of water bodies across Louisiana. Those fish are six to seven years old and bass can live up to 12 years. Little expects the older fish to get larger with age.

The LDWF also stocked about 30,000 threadfin shad, a very desirable bass food, into Caney Lake in 1990. Before then, Little said the lake's shad population was low.

Since bass spawn in the spring, females are full of eggs which, Little said, adds a pound or so of extra weight to the fish they do not have at other times of the year.

Caney is one of Louisiana's seven quality lakes having a 14 to 17-inch slot limit. However, Little said, the slot limit has only been in effect since April 1, 1991 and results of the slot will not be fully realized until a couple of years from now. With the new slot regulations in effect, she predicts largemouth bass caught in Caney Lake will continue to inch upward.

"If we have more 13 and 14 pound bass in Caney Lake, and they continue to grow at one pound per year, you're looking at some big fish," Little said. "Those fish have actually been growing at two pounds per year, so that's a very conservative estimate."

The world record for a Florida largemouth is a 22.25-pound fish caught in Georgia in 1938. □

59-6649
NEW State Rec
Brian Dav
EROS, LA.
14 pounds 5 7/8

Photo by Mike Wood

Brian Davis of Eros set the official state record with this 14-pound 5 7/8-ounce largemouth he caught in early March.

PUT 'EM BACK ALIVE!

BY GERALD ADKINS AND MIKE WOOD

"To keep or not to keep," is rapidly becoming the number one question for today's fishermen. It is a constant for anglers in both fresh and saltwater areas.

Not long ago, an angler's level of skill was often measured in pounds of fillets. Photographs displaying huge strings of dead fish were frequently featured on the sports pages of newspapers and fishing magazines. But today, the attitude of many fishermen has changed. Releasing some of the catch has become a common practice as more and more fishermen become concerned about increased pressure on our fishery resources.

Due to generations of learning, believing and teaching "if you catch it, eat it," many of us are quite reluctant to release any desirable or "keeper" fish we catch. The reasons most often heard are, "I know this fish won't live anyhow, so why throw it back?" and "The little ones are the best eating." All too often, fishermen have nothing more than their, or someone else's, personal opinion to support these statements.

This is not an article composed by people opposed to killing fish, fowl or animals for food, fishing for sport, or any other form of legal resource use. Utilization of renewable resources by the public has long been, and should continue to be, a perfectly valid form of management. Wise utilization, however, so that the resource can perpetuate itself, is the true goal of the conservationist.

Let's look at this controversial aspect of fishing called "Catch and Release" from an objective point of view. Perhaps some insights can be shared.

Fish that are released should be able to continue living and growing and resume their role in a complex ecosystem. Many studies conducted on the mortality of fish caused by hooking and handling has shown that almost all fish caught and immediately released will live. Some mortality is inevitable because penetration and removal of the hook causes some tissue damage leads to bacterial and fungal infections. Our recommendations are simply to handle the fish as little as possible and remove the hooks with minimum tissue damage.

Firstly, how can one properly release fish to best insure their survival? The simple answer is, gently. That can be broken down further for utilization by any fisherman:

a) Use single, rather than treble, hooks. This will allow unhooking to be accomplished easily and less dangerously (for both fish and fisherman).

b) Floating baits or rigs fished rather quickly, as opposed to live or cut baits fished on the bottom, reduce fish mortality since the chances of the fish swallowing the hook are reduced.

c) Play a hooked fish quickly and get it to the boat or shore. This helps reduce stress, exhaustion and the buildup of lactic acid, leaving fish strong enough to avoid predators when released.

d) Keep the fish in the water as much as possible while unhooking and releasing if at all possible. The less the fish is handled, the better.

e) If a fish must be removed from the water, place it on a wet cloth or other wetted surfaces. Wet surfaces prevent the removal of protected mucous or damage to the fish's scales. Do not use a landing net unless it's absolutely necessary. Nets scrape off mucous and damage scales, fins and mouth parts.

Fish that are released should be able to continue living and growing and resume their role in a complex ecosystem.

f) Wet your hands before handling fish. This prevents removal of mucous, which prevents attacks by parasites after a fish is released.

g) Remove the hook as gently as possible. If a fish is gut-hooked, cut the line at the hook. Disintegration of the hook will occur fairly quickly if stainless steel hooks are avoided. If the fish is gill-hooked solidly, cut the line and leave the hook alone.

h) Use barbless hooks, or flatten the barbs on traditional hooks. This greatly enhances hook removal and, in reality, the loss of fish before landing is not greatly increased. Don't believe that? Try it and you'll be surprised.

i) Return the fish to the water gently. Imagine someone dropping you onto concrete from a second floor window. A 30-foot arc shot does not make for a healthy fish!

j) When possible, handle freshwater fish by the lower jaw. (Most saltwater varieties have formidable teeth!) This immobilizes the fish.

k) Smaller species kept in a live well should not be crowded and must be supplied with abundant circulating water to avoid potentially fatal stress.

Photo by Rick Kasprzak

Unfortunately, very few fishermen keep good hook removal tools at hand. The simple tools, which include special commercial models, long-nosed pliers and surgical hemostats in a variety of sizes, minimize hook damage and reduce stress on the fish. The authors prefer surgical hemostats because they allow precise gripping of hooks and good, positive leverage. In addition, the jaws can be locked under pressure and easily released.

With most saltwater fish, particularly the larger species, lipping will not work. While lipping a large tarpon or marlin is not a great idea, several other measures are successfully used. Mackerels, jacks, tuna and other fishes having a deeply forked tail can be efficiently handled using a noose, such as the "tendergaff" described by angler-writer Sam Caldwell in 1985. The device works superbly, especially if a soft rope is used (see photo).

If a traditional gaff is used, try to gaff the fish through the lower side of the mouth. This allows release with very little harm.

Billfish may well require grasping the leader (wear gloves) and unhooking, if possible, or cutting the leader near the hook. Many anglers routinely use these methods to successfully release fish "often sought, but seldom eaten" so that they may live to fight again another day.

Fish properly fought, landed, handled and released exhibit a very good survival rate in almost all cases. The fact that they will continue to feed is confirmed in a documented case where a black drum, tagged and released offshore of Sabine, Texas, traveled beneath the boat and was promptly caught again.

At the opposite end of the spectrum, a little tunny (bonito) was tagged 64 miles south-southeast of Galveston, Texas in August, 1987. In August, 1989 the fish was recaptured near Ocean City, Maryland.

In other documented cases, a white trout released 20 miles off Galveston was later caught in the Mermentau River here in Louisiana and a king mackerel tagged off the Texas coast was caught 60 days later off Dauphin Island, Alabama.

Alabama fisheries biologists describe survival rates in their studies of spotted seatrout (speckled trout), after extensive handling, as "very good."

In Georgia waters, red drum (redfish) and spotted seatrout were caught and released under varying conditions, held for observation, and the resulted recorded. Red drum hooked in the mouth had a survival rate of 92 percent; spotted seatrout 90.5 percent. The red drum survival rate was 77 percent when gill-hooked and, even when gut-hooked, 53 percent survived if the hook was left in the fish. When the hook was removed, survival dropped to 41 percent.

Very similar results were obtained in a Texas study, which concludes, "...sport fishermen can contribute to the conservation of a species by carefully handling and releasing unwanted fish."

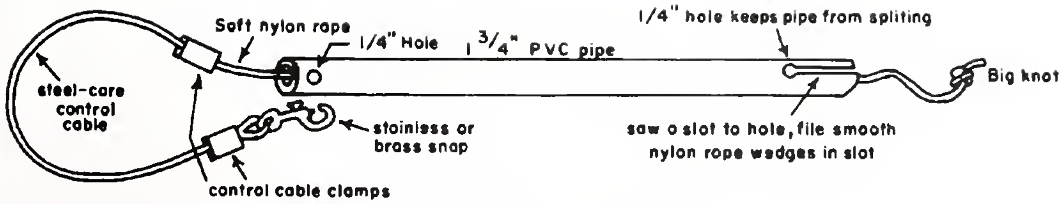
Even fish caught at fairly great depths have exhibited good survival rates when released properly. In a National Marine Fisheries study, survival rates of red drum and red snapper caught in deep water were enhanced when air bladders were punctured with a hypodermic needle, allowing the fish to swim downward quickly. Any fisheries biologist can show sportsmen how to safely puncture air bladders.

Yes, there is some mortality among fish released, but data gathered from numerous studies from various coastal states shows a surprisingly high rate of survival for all fish species examined.

Catching fish for sport is a fully legal, completely ethical and very exciting activity. Fish that are not legal to keep and/or unwanted for the table should be returned to their aquatic environment. Repeated studies, only a few of which are noted here, have shown that fish caught, handled and released properly will, in fact, survive.

Enjoy your fishing. Stay within the legal limits and keep what you want for the table.

Catching fish for sport is a great activity. Keep what you need for your table and release the rest.


Soft nylon rope
1/4" Hole
1 3/4" PVC pipe
1/4" hole keeps pipe from spliting
Big knot
steel-core control cable
stainless or brass snap
saw a slot to hole, file smooth
nylon rope wedges in slot
control cable clamps

A soft gaff helps fishermen land many saltwater species without harming them.

WEEDS THAT WON'T GO AWAY

Many of Louisiana's waterways have become overrun with menacing aquatic plants that, when left untreated, threaten to strangle the very life in them.

BY CHARLES BIGGAR

(Editor's Note: Picture your favorite river or bayou choked bank-to-bank with a dense mat of water hyacinth. Even if you could launch your boat, it would not penetrate the lush growth of aquatic weeds. This is a scenario that now occurs in many of our waterways. Without the continuous effort of the Aquatic Plant Control Section of the Department of Wildlife and Fisheries the uncontrolled spread of aquatic weeds, mostly imported exotics, could make most of Louisiana's inland waters unusable for recreational or commercial interests.)

Insufficient quantities of water in many areas in recent years have clearly demonstrated that water is the most precious and limited resource in many parts of the world. Agriculture, industrial and urban development, navigation, and recreation have been limited in many areas because of deficiencies in quantity and quality of available water.

Louisiana is blessed with an abundance of water. The state's economy and its renewable fish and wildlife resources are strongly based on this endowment.

Louisiana is also blessed with a subtropical climate. The subtropical climate, in combination with the abundant water areas, provides a highly favorable environment for the growth of a wide variety of aquatic plants.

The presence of native plants is as essential to the aquatic environments as they are to the terrestrial environment. In water, they provide the basis of the food chain for many types of aquatic life and form the habitat for much of the aquatic fauna. Vital as they are, excessive populations or masses of aquatic plants, especially exotic species, become highly detrimental to other aquatic organisms and reduce the usefulness of water for many other purposes. The importance of aquatic weed management and control is closely related to the importance and economic value of the water in which the weeds occur.

As many areas of the state have been cleared, developed and populated, more and more demands have been placed on the water systems and their resources. Years of development have changed the natural runoff of nutrients into water bodies. Sewage, fertilizer and industrial waste have thrown water bodies out of natural balance. The increasing enrichment of water bodies has accelerated the growth of aquatic vegetation. Out of control or misplaced aquatic plants have become a "weed problem" which must be dealt with.

Louisiana's water is being intensively utilized to meet rapidly expanding commercial and recreational requirements. If we are to protect, utilize and enjoy our water resources fully, sound management is required. Aquatic weeds constitute one of the most serious problems in water management because infestations can adversely affect fish and wildlife habitat, impede recreational activities and destroy aesthetic values.

Louisiana has 6.4 million acres of aquatic habitat, of which more than 4 million acres are subject to noxious growths of aquatic vegetation. The Department of Wildlife and Fisheries is mandated by Act 513 of the 1976 legislature to regulate and control noxious aquatic weeds. The department's mission is to manage and conserve aquatic habitat to ensure its wise utilization and safeguard it for the enjoyment of present and future generations. The Aquatic Plant Research and Control Section is assigned the responsibility of management and control of water hyacinths and other noxious aquatic plants.

Worldwide, there are approximately 175 species of vascular aquatic plants and algae known to interfere with water resources and aquatic ecosystem management. Many of these are currently creating problems in Louisiana. Most of the problems consist of exotic species of plants (not native to Louisiana or to the North American continent). Once established, most exotic plants out-compete native species for food, space and sunlight. Exotic aquatic plants presently creating serious problems in Louisiana are: Water hyacinth (*Eichhornia crassipes*), Alligatorweed (*Alternanthera philoxeroides*), Hydrilla (*Hydrilla verticillata*), Brazilian elodea (*Egeria densa*), Eurasian watermilfoil (*Myriophyllum spicatum*), Water lettuce (*Pistia stratiotes*), and Salvinia (*Salvinia rotundifolia*).

The water hyacinth is the major pest plant against which control efforts have been directed since the inception of our aquatic weed control program.

The problem began in 1884 with an innocent gesture at the Cotton Exposition in New Orleans. Japanese exhibitors gave away, as souvenirs, a small plant that resembled a lily, with lush green leaves and a delicate, beautifully proportioned purple orchid-like flower -- the water hyacinth. The hyacinth plants were transported to other parts of the state

Water hyacinth grows quickly and can fill a water body in a matter of months.

and placed in shallow ponds, small lakes and other water areas. The survival of this exotic species has been so successful it has caused 108 years of ever-increasing problems. These problems range from severely restricting utilization of aquatic resources and navigation, to complete degradation of the aquatic habitat so vital to fish and wildlife.

In 1969, approximately 1 million acres of Louisiana waterways were infested with water hyacinth. In acknowledging the seriousness of the problem caused by this infestation, the legislature passed Act 545 in 1970 wherein fees for recreational fishing licenses were increased by $1. Funds generated by this increase were dedicated to the expansion of the Aquatic Plant Control Program. Several years were required to implement the expanded program. By 1975, the infestation of water hyacinth had spread to 1.7 million acres. Maintenance "control" (as opposed to eradication) of this tremendous infestation was not achieved until 1984. Maintenance control is defined as maintaining nuisance plant populations at their lowest controllable levels with an ongoing management program. Under maintenance control, the infestation is now stabilized at approximately 215,000 acres. Recent data indicates that 30,000-35,000 acres must be treated annually to maintain this level of control.

Water hyacinth is an extremely prolific plant with one of the highest growth rates in the world. A mat of water hyacinth can literally double in area every 10 days during the growing season! A single plant has the capability of producing 65,000 - 70,000 daughter plants in eight months! One acre of hyacinths can yield as many as 45 million seeds annually which remain viable in the natural environment for a minimum of 20 years.

Hyacinths have the potential to completely cover the surface of most inland waterbodies with impenetrable floating mats. Open water areas could become floating marshes, with terrestrial trees and grasses firmly established on top of those floating mats. It is clearly evident that the water hyacinth is a serious pest plant which threatens the aquatic environment of Louisiana.

Hydrilla is presently the second most threatening plant found in our aquatic environment. It thrives in a variety of water conditions: clear to muddy, acid to alkaline, fertile to infertile, shallow to deep. It tolerates high salinity levels and requires less light for growth

Spray crews keep the growth of water hyacinth within acceptable limits.

Hyacinth weevils have been released in the wild to help control the rapid spread of the plants.

than native aquatic species. This plant outcompetes and usually crowds out all other submersed plants. Hydrilla has three methods of reproduction: underground tubers, cone-like turions, and fragmentation. Plant dispersal occurs most commonly by fragmentation. Its adaptability and reproductive capabilities make hydrilla extremely difficult to control. Aquatic plant biologists now agree that hydrilla is potentially the greatest single threat to Louisiana's aquatic environment. More threatening than even the noxious water hyacinth!

In Louisiana, hydrilla was first discovered in Spanish Lake north of New Iberia and Sibley Lake in the City of Natchitoches in 1973. It is now flourishing in many inland waterbodies including Toledo Bend Reservoir and the Atchafalaya Basin. Heavy infestations also occur in many lakes, bayous and canals of coastal Louisiana.

Other activities in which Aquatic Plant Section personnel are involved include providing technical advice on the control of aquatic vegetation to private pond owners, development of lake management projects, evaluation of new aquatic herbicides, monitoring the effectiveness of various biological controls, surveying and typemapping lakes to determine plant species composition and density, and other projects concerning the management of the state's aquatic habitat.

A number of alternatives have been explored in the continuous effort to develop the most efficient, safe and economical program for controlling noxious aquatic weeds. Consistent with the need to safeguard the environment, various EPA approved herbicidal, biological, mechanical and other methods have been investigated. At the present time, combinations of herbicide control, water level fluctuations and biological agents have proven to be the most efficient, economical and practicable measures for aquatic plant management in Louisiana.

The alternative of a "no control" program has also been considered. It has been established that this alternative would cause unacceptable damage to the aquatic environment resulting in economic as well as ecological disaster to our State.

The war against weeds that won't go away is simply a war that cannot be won, but which must be fought. □

Photo by Ken Glaser

THE ELECTRIC KNIFE...A MODERN METHOD OF

Fish Filleting

BY SOC CLAY

Anglers should follow a few basic steps during the process of getting fish from the water to the table. The best way to avoid wasting prime fish meat is to learn proper techniques for filleting.

The mid-summer sun was hot enough to fry the proverbial egg on concrete as my fishing partner, Don Groh and I struggled to lug a string of crappie to the trucks parked near the Toledo Bend State Park launching ramp.

The chore of cleaning the mess of fish we had been so delighted to catch only a short time previously, was not something either of us looked forward to. Not only was it simply too hot for such work, neither my partner nor I had a filleting knife sharp enough to slice through a stick of warm butter.

A small crowd collected by the tailgate of a pickup parked nearby was enough to create a diversion from the dreaded job that lay ahead. Someone had probably caught a big fish-and surely it was a dandy to attract so much attention from this famed fishing lake. We decided to investigate.

As it turned out, Earl Herbert, a tall drink of water from the Lake Charles area, was demonstrating a short-cut method of fish filleting that would forever change my attitude about cleaning fish. The year was 1973 and Herbert, an expert crappie fisherman, had figured out a fantastic way to utilize the new electric carving knives that were being sold in most department stores. With a few flicks of the wrist, he showed how the product could eliminate much of the usually dreaded task of fish cleaning.

In what seemed to be no more than seconds, the on-lookers learned how to fillet a crappie without so much as getting their hands wet! I was amazed at the simple, yet effective procedure. So much so, in fact, I bought his knife! Since then, my family has enjoyed eating delicious and healthful bone-free fillets that once would have been returned to the water or given away to avoid cleaning them after a long day of fishing.

Each year, anglers across the state waste literally thousands of pounds of prime eating fish simply because they are too tired, really don't know how to fillet a fish properly or often because the fish were spoiled by the time they got around to cleaning them.

With the electric carving knife and a little know-how about the proper way to keep fish fresh once they are caught, more and more anglers can enjoy fresh, cleanly prepared fish fillets that are probably better than anything that can be purchased in the local fish market. And best of all, they are free!

The effort of saving fish for the table starts long before the cleaning stage is reached. Fish meant for the dinner table should be placed on crushed ice the instant they are removed from the hook. Boat livewells help keep fish alive (at least when the water is cool), but most fish-eating connoisseurs readily agree that the best tasting fish are those that are placed on ice immediately after being caught.

Depending on the species and the number of fish expected to be caught, an appropriately sized cooler partially filled with crushed or cube ice should be included with the traditional fishing equipment. Commercial fishermen have proven time and again that fish will remain fresh for up to 24 hours, and sometimes even longer, without gutting or gilling-if placed on ice as soon as they are caught.

As quickly as possible, fillet the catch and place the fillets back on ice or place them in a cold refrigerator. Fresh fish should be eaten within 24 hours after cleaning. For longer storage place the fillets in a plastic container, cover with water and freeze quickly in the coldest area of the freezer (water helps prevent freezer burn and fish can be kept frozen for longer periods of time).

For cleaning the modern way, there is a variety of A.C. and battery-powered filleting and carving knives on the market. My personal choice is an A.C. model made in Louisiana by Mister Twister. The unit features a slender, easy-to-grip handle with a handy on and off trigger switch located on the front underside of the handle. A heavy-duty coil cord affords additional flexibility for the knife.

There are other re-chargeable, battery-powered knives that are practical to use when A.C. power is not readily available. Most of the units are priced less than $30 with additional re-chargeable battery packs available. Blade replacements are offered at many sporting goods outlets for about $5 per set (two blades).

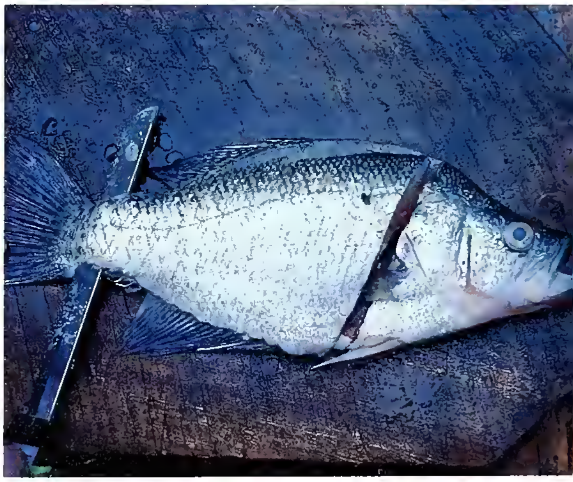
Some degree of caution must be used when using electrically-run knives. Especially, keep the unit free of contact with water. Make sure the cord is free of nicks to avoid electrical shock and avoid using the knife when the floor is wet. A solid, wooden cleaning surface works best and anglers who wish to avoid the small nicks, jabs and cuts generally associated with cleaning fish will find that wearing a pair of Kevlar gloves (made of bullet-proof material) is helpful.

A couple of fish are about all that first-time electric knife users need to fillet to get the hang of utilizing this handy tool. In only a short time, anglers discover that cleaning fish the modern electric way is not only easier and faster, but much less messy than conventional methods.

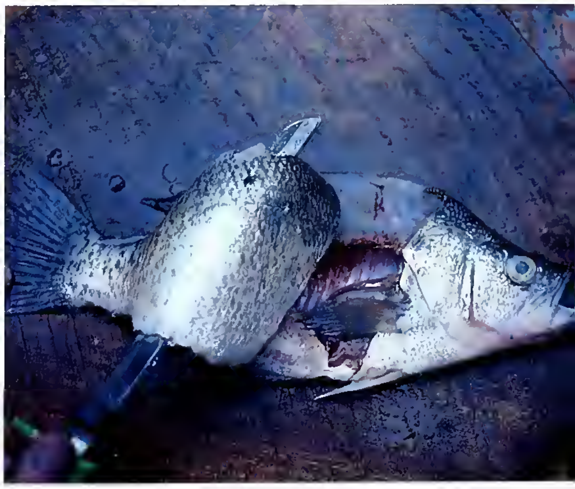
With this modern method of fish filleting, both large and small fish ranging from saltwater species to panfish can be cleaned in a jiffy, using the same procedure.

The accompanying photos illustrate the step-by-step method for electric knife filleting. ☐

It only takes a short time to learn how to fillet a fish using an electric or battery-powered knife.



Photos by Soc Clay



pollution

ONLY YOU CAN STOP IT!

STORY AND PHOTOGRAPHY BY CHARLES W. FRANK

Almost any beach, bayou, highway or lake is proof of the impact caused by careless stewardship of our land and water. Steps must be taken now to keep this from being our legacy.

Why am I angry? It's a beautiful spring morning. Cumulus clouds like giant cotton balls drift through a sky so blue I feel like painting it across the world. The redwing black birds are nesting in the marsh , weaving thin strands of rust-brown grasses into their beautiful pendulous nests. Golden hued after the winter's cold, three-cornered grass and cord grasses are beginning to show emerald green against the coffee brown of swamp water. New growth clamors to be recognized as the harbinger of the miracle of the Almighty's changing of the seasons.

Every now and then a faint tap on our lines, and another sheepshead tugs fitfully in a vain attempt to win his freedom. A brief tussle, a final swirl or two at the surface and he's in the ice chest, promising another delicious meal from the bounty of our marsh. The bayou bottom is literally paved with seed oysters and the ripple of occasional specs or reds chasing small fry along the shallows quickens the pulse in anticipation.

I turn smiling to my companion, only to have my gaze stop abruptly on the edge of the marsh. There nestled against this gold and green beauty is a white disposable cup and several aluminum cans. The tide is running out and as I turn to comment, another body blow - a plastic bag filled with the non-biodegradable waste from a sportsman's camp floats out on the tide, further adding to this discordant aberration of our coastal estuaries.

Is this an isolated incident? Quite the contrary. Almost any beach, bayou, highway or lake will bear mute testimony to the careless nature of stewardship of our fields, woodlands and streams. With the ever increasing number of camps and summer homes, our problem is accelerating at an alarming rate. The increased use of non-biodegradable containers in the name of economy adds materially to the magnitude of our problem. Oceanographer Jacques Cousteau, in a dive off the mouth of the Mississippi River some 10 years ago, reported the Louisiana continental shelf is awash in plastic. Much of this came from the waste from our northern neighbors, floating down the Mississippi River and its tributaries. But, my observations lead me to believe we are all laggards and major contributors to this refuse blight. We must find innovative means to solve this degradation of the natural beauty with which we have been so abundantly blessed.

What can we do? What are we doing?

Many industries are today not only concerned but actively seeking remedies to past abuses. Louisiana Land and Exploration Company has led several very commendable efforts to combat the problem. It has adopted the beaches on Timbalier Island, cleaning them regularly of waste materials washed ashore by wind and tide. This debris has been carefully recorded and the most common items found in this "pollution" are styrofoam cups and containers. Much of this is cast overboard by commercial fishermen, offshore oil platform crewmen and "sportsmen" who think their contribution to this mess is too small to matter. Not so! The waste from one day's fishing in a small boat with just two or three men can fill a good sized garbage bag rather quickly.

LL&E has issued directives demanding that its field workers use nothing but biodegradable cups and containers. Their stewardship of lands has protected many active petrochemical facilities from industrial waste and salt water intrusion, one of our most pervasive sources of coastal erosion.

Berkley Inc., probably the largest manufacturer of monofilament fishing lines and tackle, and Ande Monofilament, another large manufacturer of this same product, are encouraging fishermen to keep old lines for proper disposal, placing bins in many tackle shops for suitable repositories. Fenwick now encloses a "ziplock" type bag with each spool of new line to dispose of old line.The refrain is "Discarded line is done fishing. It may not be done killing." Fish and birds are both susceptible to entanglement in carelessly discarded monofilament, plastic soft drink holders and, yes, the pop tops of many beer cans . Strong and durable, these products can cause death by starvation to bird, fish or mammal enmeshed in their coils. And, these products can go on killing year after year.

The great law of the Indian Iroquois Confederacy was, "In our every deliberation, we must consider the impact of our decisions on the next seven generations." Still more than a little germane to our consideration as to how we are going to handle our own waste disposal. Nor did this wisdom stop with the Iroquois. Theodore Roosevelt, a great hunter and lover of the outdoors life and all it portends, said, "To waste or destroy our natural resources, to skin and destroy the land instead of preserving so as to increase its usefulness,

The beauty of Louisiana's waterways is often tarnished by the discarded trash which accumulates in abundance.

Louisiana has recently begun to publicize a new litter law. Violators can lose their driver's license and face fines.

will result in denying the days of our children the prosperity which we ought by right to hand down to them amplified and developed."

The State has recently begun to publicize a new litter law. The warning is plain. "It can affect your pocket book. It could take away your driver's license."

And, the Louisiana Office of Litter Control and Recycling has issued a call for a boater's and fisherman's pledge for clean water. This pledge to transport to shore for proper disposal of all trash generated on board, to retrieve and return for proper disposal all litter found floating in navigable waters, and to encourage fellow boaters to take this pledge, can be a powerful force. But, to date I've seen little proof that we are enforcing our regulations. Our highways are strewn with discarded garbage bags, empty bottles and cans to say nothing of the rusting eyesore of appliances strewn carelessly about. This is why I'm angry. You should be too.

The United States Environmental Protective Agency (EPA) has just completed a workshop for citizens in New Orleans. The topic of teaching us "to better understand and participate in environmental regulatory activities" is a step in the right direction. But it depends on us.

As the comic strip Pogo points out "They is trashing our swamp, and they is us!"

One of the brighter examples of what can be done are the 14 state parks and 12 commemorative areas that are being beautifully maintained. Many of these have beautiful cabins and lodges located in lovely settings. These can be reserved for very nominal fees, offering all an opportunity to camp in the most luxurious fashion. Barbeque pits and trash barreis are placed strategically and the availability and the cleanliness are a blue ribbon tribute to one of our state's better projects. From Chemin-a-haute (high road) in Bastrop to Grand Isle, they are a shining example of what can be done. Varying from the cypress swamp of Chicot State Park, to the beaches and fishing piers at Grand Isle we are overwhelmed by the beauty and variety of our State. The beauty of Oakley Plantation where John James Audubon saw beauty unbounded, of our woods; the quiet of hours spent in the silent majesty of the Lake Bistineau Park near Shreveport, the thrill of wandering about the newly created Catahoula Wildlife Refuge in the footsteps of Indians long gone, of finding an Indian midden and a small potsherd, soot stained by a fire from millennium long past; these and a hundred other pleasures await us if only we can keep our land clean. The happy ambience of swimming and picnicking in Fontainbleau State Park near Mandeville, where oak trees and hardwood groves with wandering paths, where fallen leaves give an eerie silence to our footsteps, offers another diversity to our tastes. Even here, the adjacent roadways and the beaches that border these areas are frequently a disgraceful reminder of our folly. More signs must proclaim "Don't mess with Louisiana". We have to mean it! Clean waterways and beautiful recreational areas don't just happen. It's up to us.

Progress is spotty, but some signs of improvement are showing. American Cyanamid has promised to cut its discharge of hazardous waste chemicals by 75 percent in the next three years. Industrial polluters must know we have been patiently waiting for a change. But they must also recognize that our patience is running out. Days of industrial profligacy and carelessness are now under a much tighter reign. Journalists and politicians must be more responsive to our needs.

A powerful watchdog on this menace is the Louisiana Wildlife Federation. Its program to annually recognize individuals and organizations who have contributed to the "management, enhancement or protection" of Louisiana's natural resources culminates in the "Governor's State Conservation Achievement Awards." Ideas like this are the foundation on which a continuous series of building blocks may structure a lasting program.

Saving our environment is not an option, it is a necessity. Recognition of this territorial imperative received another boost recently with the establishment of a half million dollar Environmental Education Center at the Barataria Unit of the Jean Lafitte National Park, just south of Marrero. U.S. Senator Bennett Johnson was on hand for the ground breaking ceremonies and lauded the facility as a "wave of the future," educating our citizens as to the impact ecology will have on the quality of our lives. The appointment of Edgar Villion, a long-time member of the Louisiana Wildlife Federation's executive committee, to the Lafite facility will assure input from this dedicated conservation organization.

Project WILD, a program designed to teach conservation and environmental concern to school teachers and students should hopefully have an impact on inner city families as the younger ones bring home the message that conservation means keeping our own world squeaky clean. Urban pollution has created an image of inferiority for many of our lower income areas. A feeling of pride is an indispensable facet to building awareness of the task that confronts us. Awareness of our environment can be a giant step in the right direction. Suitable trash disposal in urban areas will be reflected in a cleaner out-of-doors.

Birdwatchers, hikers, hunters, fishermen and campers must be made increasingly aware of a mutual responsibility to protect our wetland heritage. Many of these lovers of the outdoors are non-consuming users of the natural resources they are enjoying. Strange that so often a number are so careless. We are all entitled to a pristine look at the bounty nature has bestowed on Louisianians.

If all of us, through education, media pressure and political action, are made aware of the progress and the pitfalls, perhaps my anger and yours will disappear. The blue skies and the rainbow that are harbingers of a happy change in the weather, will be reflected on bayous and lakes whose shores and estuaries will be clear of the careless by-product of our increasingly industrialized life-style. The bottom of the waters will not hold a legacy for future generations to ponder our thoughtless abuse of our planet earth. Stately live oak trees will again be festooned with Spanish moss, one of the victims of excessive air pollution in recent years.

The National Geographic Magazine recently editorialized about the monetary impact of public parks. In 1980, 93 million people were attracted to view the natural beauty and wildlife of our parks. By 1985 the number had grown to 135 million people, spending 14 billion dollars. Who can guess how much greater the totals must be today? The pleasures we derive from the passive use of this national asset is being negated by our carelessness. We must try to change from a "throw-away society" to one in which we are aware that every sheet of paper, every disposable diaper and container must be accounted for.

Quoting friend Pogo once more. "We have met the enemy, and he is us." ☐

This dead pelican is a reminder of our thoughtless waste of wildlife through pollution.

Spring Bayou is a popular place to visit by boaters, birdwatchers, horseback riders, campers, sightseers and photographers because of its uniquely pristine beauty.

SPRING BAYOU

WILDLIFE MANAGEMENT AREA PROFILE

BY JOHN MULLINS

Spring Bayou Wildlife Management Area, a 12,078-acre tract purchased by Louisiana Department of Wildlife and Fisheries in 1968, is located in north central Avoyelles Parish.

The area contains approximately 4,500 acres of open water in small shallow lakes and bayous and was once noted as a keystone to Louisiana's sportsman's paradise due to its abundant fisheries resource. A natural "sump" in the Red River backwater area, the Spring Bayou complex once flooded and drained every year with the Red, Mississippi, Black and Atchafalaya River systems. This annual flood cycle produced bumper crops of crawfish, grass shrimp, and game fish. Prime waterfowl foods such as chufa and wild millet were also enhanced by the fluctuating water regime.

The natural water cycle was altered during the middle 1950s by the construction of a weir on the Little River outflow. The weir was installed to stabilize the water level at 41.0 feet MSL and answered the stated desire for year-round water sports recreation access. The loss of the wet-dry cycle, however, started a decline in the productivity of game fish populations that continued until 1982. Although temporarily stimulated by the floods of 1973 and 1975, game fish stocks fell from 58 percent of the total fish population in 1962, to 12 percent in 1981, according to rotenone samples conducted by fisheries biologists. The decline in game fish was aggravated by land clearing and row crop production in the headwater swamps that feed water to the area and this, in turn, accelerated heavy siltation in the shallow lakes and bayous on Spring Bayou.

Water quality continued to deteriorate until state officials, prompted by local businesses and the Avoyelles Sportsmen's League, initiated a project to install a drawdown structure at the Little River weir site. The structure was completed in early 1982. A summer drawdown scheme was proposed by biologists to address requirements of game fish production, migrating waterfowl, and outdoorsmen. Drawdowns were conducted in 1982, 1984, and 1986, despite some controversy about loss of summer recreation by a vocal minority.

Improvement in water quality and game fish production was apparent within a few months after the lakes refilled. Additional fisheries improvements were brought about with projects initiated by the Avoyelles Fish and Wildlife Federation. A deepwater channel three-and-a-half miles long was dredged to connect the shallow lakes on the area and provide a more diverse fish habitat. Florida bass were stocked in 1987. A weir project is currently planned near the confluence of Old River and Coulee des Grues to limit siltation in the Old River area.

The game fish resource is returning to Spring Bayou "in spades," although the area fishery will may never be what it was in the heyday of the 1950s due to land use changes in the watershed. Rotenone samples taken in 1989 showed that game fish now comprise about 20 percent of the total fish population. Bass clubs once again hold tournaments and catch respectable stringers. Bream and sac-a-lait are abundant. Local businesses are again stimulated by the sales of bait, supplies and fuel to fishermen.

Many other wildlife species are found on the Spring Bayou complex. Trappers take raccoon, mink, nutria, beaver, otter, fox, skunk, opossum, coyote and bobcat.

Bird life is abundant, with several active wading bird rookeries. Ducks, coots gallinules, geese, and woodcock are available to the hunter during open season. Wild turkey are also present on the area and will probably reach huntable numbers in a few years. Other species hunted are alligator (bi-annual bid for permits), squirrel, rabbit and deer.

Fifty alligators per year have been taken from this area since this animal was removed from the endangered species list in 1982 (excepting 3 drawdown years), and alligators are abundant as ever.

Deer are also abundant, but difficult to hunt due to large areas of flooded and dense escape cover. Annual hunter harvest is approximately 10 does and 30 bucks. Several bucks in the 250 pound weight class have been taken in the past few years.

Squirrel populations on Spring Bayou are normally limited by the lack of variety in mast-producing trees. Temporary abundance in squirrel numbers follow years of high acorn production in overcup and Nuttall oaks. Swamp rabbits are present on the area and beagle enthusiasts enjoy an experimental dog hunt in late January every year.

The Spring Bayou area is also utilized by boaters, bird watchers, horseback riders, campers, sightseers, research projects and photographers. An area of great natural beauty, it relieves enough of the stress from today's harried world to keep many outdoorsmen off of tranquilizers.

The Spring Bayou Wildlife Management Area story, although not a news flash of dramatic success, does demonstrate that we can mitigate, to some extent, wildlife destruction brought about by increasing human populations and changing land use practices if we are willing to expend the effort and funds required. □

Bird life is abundant on Spring Bayou and a number of species frequent the area.

Photo by John Mullins

Canine heartworms could have tragic consequences for dogs if untreated. Thanks to medical advancements, they are preventable and treatable.

Photo by Joey Sedtal

HEARTWORMS ...

THE UNSEEN CANINE KILLER

BY DON DUBUC

The first step in combating heartworms is through blood testing.

Located at the Mississippi River Delta, where land meets the Gulf of Mexico, Louisiana's swamps and brackish or salt marshes have helped the state earn many titles. Unofficially, the Bayou State is the goose, crawfish and catfish capital of the world. We also have a distinction, much less publicized albeit just as well known to locals, as "mosquito capital of the world." Thanks to modern medical technology and a properly immunized public, mosquito-borne diseases such as malaria no longer pose a serious threat to the people of this country. When it comes to our dogs, however, the Louisiana Veterinary Medical Association estimates that only 20 percent are protected from insidious parasitic worms that infect and, if untreated, will eventually kill them. The primary targets of heartworms are hunting and other outside dogs.

Dr. Paul Ritch, a Mandeville veterinarian, sees lots of heartworm cases. "The odds are heavily in favor of infection, particularly in the hunting breeds, due to exposure. But all species, even those that spend most of their lives inside, are not completely safe. In fact, 95 percent will become infected within their first year of life if no preventative is administered."

THE CYCLE

The name "heartworm" aptly describes the parasite. Adult worms range from six to 14 inches long. They attach and grow in the right side of the heart. Tiny immature heartworms are called microfilaria and are present in an infected dog's bloodstream. When a mosquito bites an infected dog, some microfilaria are ingested by the insect and, in two weeks, develop to an infective stage. When the mosquito bites again, it deposits these larvae into a dog's blood. They bore into the animal's tissue and migrate to the heart where they mature and begin to reproduce, thus completing the cycle.

SYMPTOMS

"At first, there are no visible signs", says Ritch. "Eventually a slight cough will develop. Progressively, the cough becomes severe and the dog will exhibit loss of energy and weight as the heart becomes congested with worms. The dog will ultimately die. Before death occurs, the dog may, as a carrier, become a source of infection for many other dogs. That's why it's extremely important to test, treat and prevent its spread." While congestive heart failure is the most serious condition, heartworms can also damage lungs, liver and kidneys, and drastically shorten and reduce the quality of a dog's life.

TESTING

The first step in combating heartworms is thorough testing. Because the drugs used to cure and prevent the disease can be harmful or even fatal if given to an infected dog, medication can be administered only after proper testing and by veterinary prescription.

Veterinarians conduct blood tests to determine presence of microfilaria and adult worms called "occults". "We recommend testing on

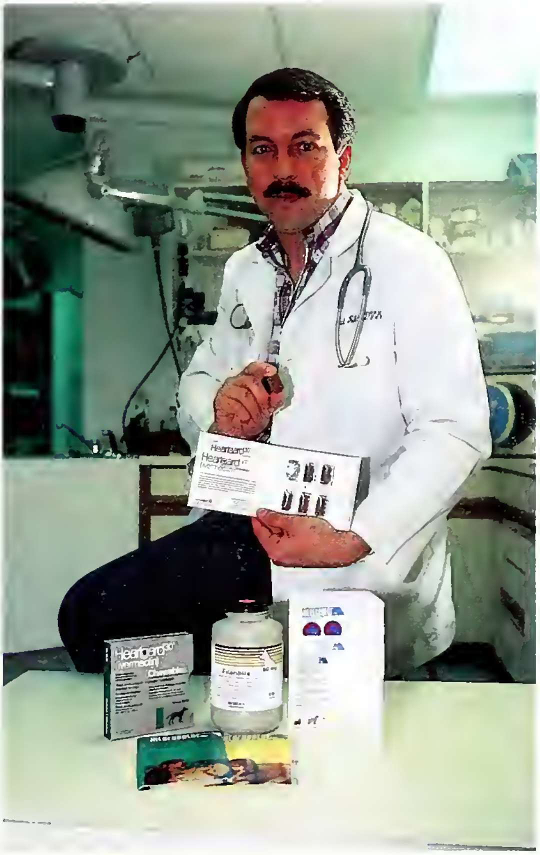


Photo by Joey Sedtal

Several heartworm preventative medicines are available on the market today. One is administered monthly, the others daily.

an annual basis", says Ritch. "It's a safety precaution in the event of improper dosage of preventatives. Testing should also be done whenever symptoms are present."

TREATMENT

If a dog tests positive, the owner has just two options. If no treatment is administered, predicted life span is uncertain and the parasites will cause the dog much suffering and loss of performance.

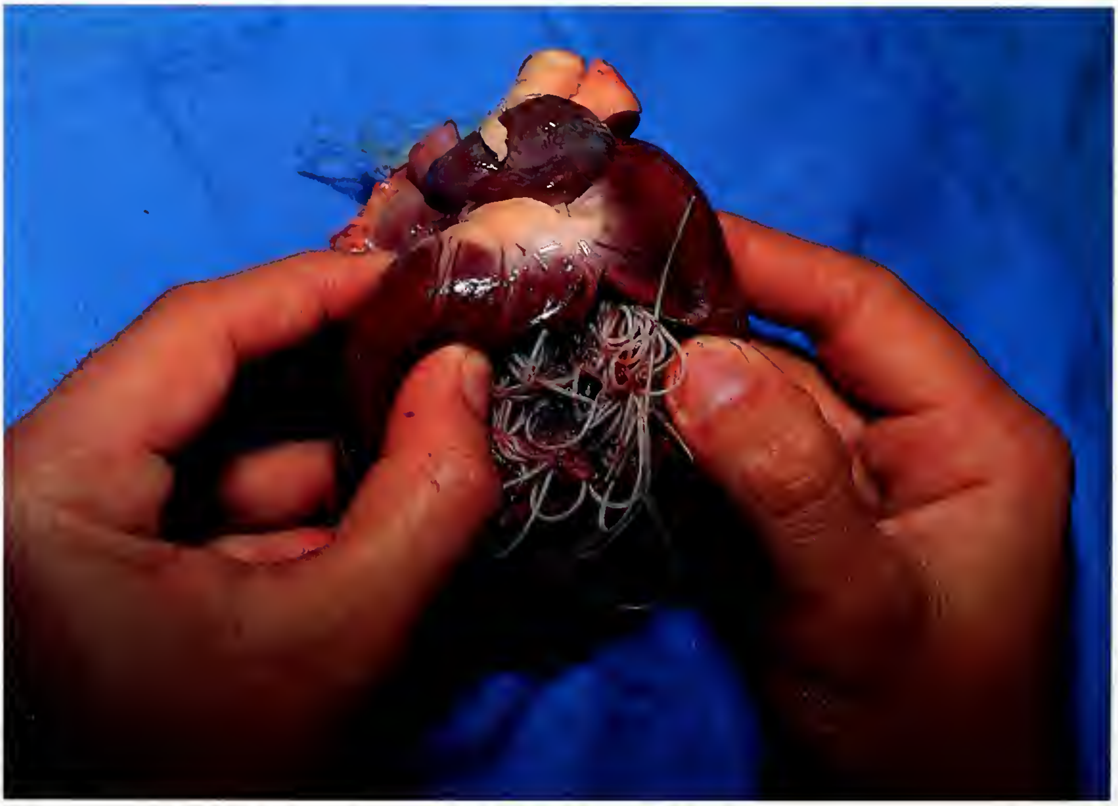
On the other hand, modern treatment now boasts a 95 percent success rate. According to Ritch, the treatment and cure are accomplished in three phases. First, the adults are killed through the use of an arsenic-type medication given over a two-day period. This does present some risk to the dog. During a subsequent monitoring period, exercise must be limited and care taken that worms breaking loose from the heart do not cause damage to the lungs. In the following weeks, the microfilaria are removed by either oral or injected medication. Finally, the dog is tested for complete eradication and put on a preventative. If you think treatment is an expensive proposition, equally hard on the dog, you're right. The old adage about an "ounce of prevention" couldn't be more true when it comes to heartworms.

PREVENTION

There are two types of medication now available by veterinary prescription. Both are given orally; one on a monthly basis and the other daily. Some brands even include drugs to control other intestinal parasites (worms). In Louisiana, medication must be given continuously since mosquitos are present all year. "These preventatives are 99.9 percent effective," says Ritch. "Puppies can be started at six to eight weeks, but dogs five months or older must first be tested."

SUMMARY

The bottom line on heartworm disease is that, although tragic if untreated, it is also treatable and preventable. The Louisiana Veterinary Medical Association and other organizations provide assistance to pet owners with testing. For more information about the disease, they can be contacted at (800) 524-2996, or consult your local veterinarian. ☐



Heartworms are parasites that grow in the right side of a dog's heart and range from six to 14 inches long. The larvae are transmitted through mosquito bites.

Photo by Joey Sedtal

Education Corner

A CLOSER LOOK

By Lyle Soniat and
Eleanor Abrams
Louisiana Sea Grant College Program

Of all the natural phenomena one can observe, none is more constant or more pervasive than the transformation of energy. Just as a car needs fuel to run, all living organisms require energy to sustain life. In every activity involving man, other animals, or plants, energy is transformed. Stored energy in food is used to lift, run, walk, swim, fly, breathe, reproduce and all the thousands of other activities that creatures must perform in order to live. In fact, energy transformation is the basis of life.

Most energy expended on earth derives in one form or another from the sun. Every day the sun bombards the earth with energy equivalent to 100 atomic bombs. We use only a fraction of it. About 10 percent of the sunlight falling to the earth's surface is captured by green plants.

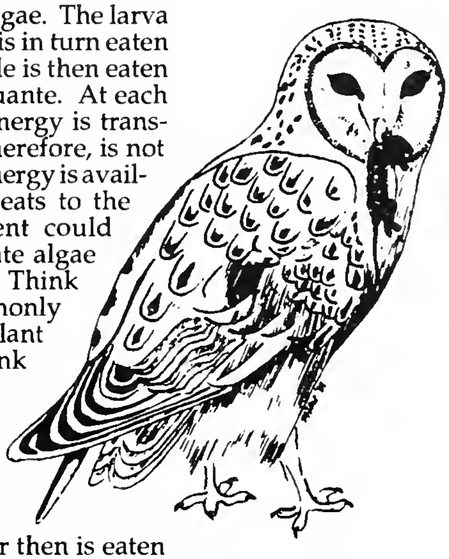
Green plants transform the sunlight into energy able to perform work through a process known as *photosynthesis*. The sun's energy is stored in the linkage of two simple compounds—water and carbon dioxide. This combination produces sugars. Sugar enables the plant to store energy for use when needed. Oxygen is released into the air as a waste product of photosynthesis. That release of oxygen is necessary for animals. In respiration, animals breathe in oxygen needed to break down the sugars to release stored energy and they exhale the waste product of carbon dioxide. Plants also respire when they break down sugar for energy needed in various life processes. This is similar to our respiration because oxygen is combined with sugar to form water, carbon dioxide and the desired energy. However, more oxygen is produced during photosynthesis than used during plant respiration. The net oxygen produced is used in animal respiration.

The molecules used in photosynthesis and respiration processes are recycled constantly into various different forms such as sugar, water, air and plant tissue. No new matter is ever created or added on Earth except by meteorites (which add very little). No matter is destroyed or leaves Earth except by rocketship. It is only transformed. Unlike matter, energy leaves the planet in the form of heat. Earth must have constant sun streaming upon its surface for life to continue.

Stored energy in food is used to lift, run, walk, swim, fly, breathe, reproduce and all the thousands of other activities that creatures must perform in order to live.

Plants, or *primary producers*, harness the sun to produce energy-bearing molecules, thus providing food for themselves. Animals, called *consumers*, are not capable of photosynthesis, so they must consume either plants or other animals. Not all the sun's energy photosynthesized by a plant is available to an animal, because the plant uses some of it. In fact, the animal receives only about 10 percent of the photosynthesized energy. The majority of the energy is used for tissue maintenance, growth, reproduction and other activities that are necessary for survival.

Before each transfer, some energy is used by either plants or animals to live. For example, a mosquito larva eats algae. The larva is eaten by a small bass, which is in turn eaten by a snapping turtle. The turtle is then eaten by a Cajun as turtle sauce piquante. At each level, only 10 percent of the energy is transferred. The energy transfer, therefore, is not efficient. More sun's orignial energy is available the closer an organisim eats to the plant level. The environment could support more Cajuns if they ate algae instead of snapping turtles. Think about the animals that are commonly seen in nature. Are there more plant or meat eaters? Why do you think this is so?



Biologists illustrate possible relationships between producers and consumers in a *food chain*. For example, a caterpillar eats the leaves of a cottonwood tree; the caterpillar then is eaten by a robin; and the robin is in turn eaten by a

FOOD WEBS

cat. The chain could go on if a dog eats the cat! Food chains show simple consumer relationships, but in nature, it is much more complex. To illustrate this, scientists use the idea of "webs" rather than chains.

Most animals eat a variety of plants and animals. While a food chain cannot show the different foods that an animal is capable of consuming, a food web can. A food web exhibits the relationships (or links) among a variety of plants and animals. A caterpillar might be eaten by a robin, a bat, or a turtle. In addition, decomposers are shown within the food web diagram. Decomposers, such as mushrooms, are organisms that consume dead plant and animal material, releasing the energy and nutrients trapped in the dead tissue. This is nature's way of recycling.

Ecosystems have a natural balance and stablility through the various relationships between producers and consumers. A caterpillar, for example, can look for another type of plant or the bat can find another type of insect if it can't locate its main food. Resource managers try to maintain natural ecosystem balance by regulating animal populations. They use various techniques to maintain natural species diversity such as hunting, trapping, fishing, habitat manipulation such as with the use of marsh burning, plantings and fish and animal stocking. Too few or too many of one species could be detrimental to other species within an ecosystem.

This is a problem now in Louisiana. Nutrias were introduced into the state's coastal marshes from South America. Without enough predators to check it, the nutria population exploded and has denuded the marsh in several areas of the state. Introduced species, known as *exotics*, can upset the delicate balance of natural ecosystems. Laws are enacted to try to control the introduction of exotic species that may upset the balance in the food web.

> ***Ecosystems have a natural balance and stability through the various relationships between producers and consumers.***

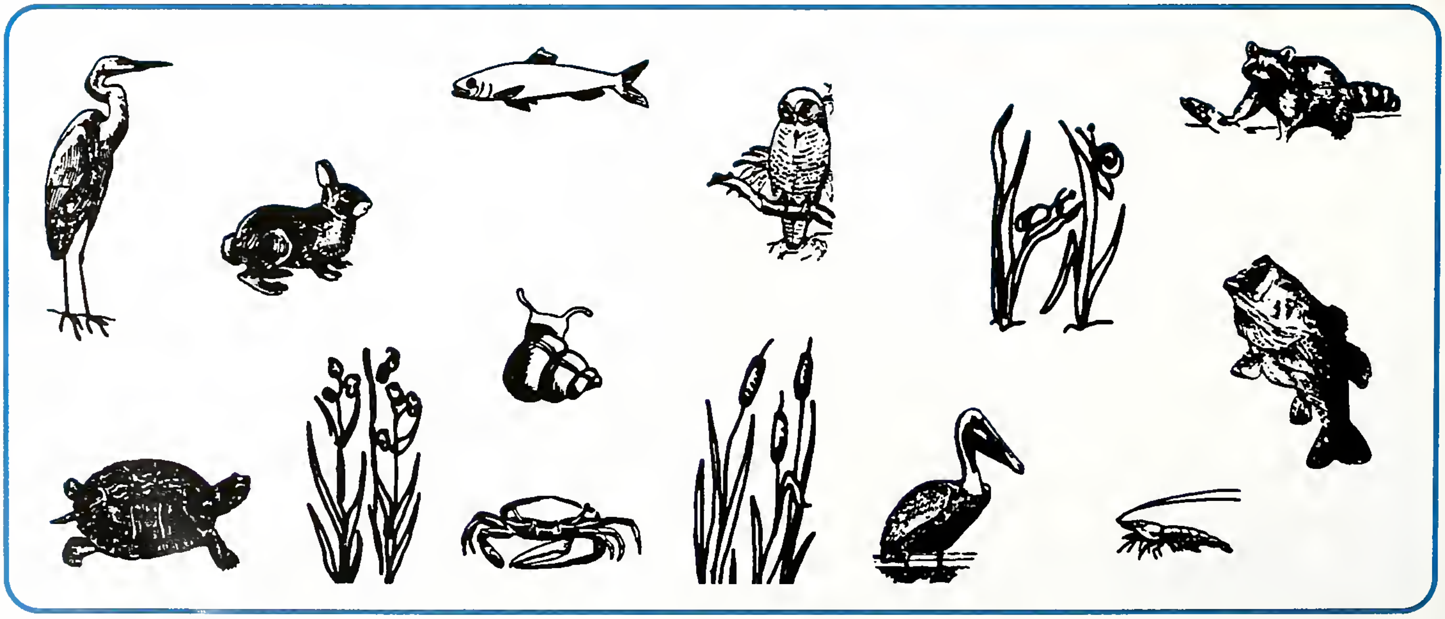
ACTIVITY

Name some other animals that have been introduced into Louisiana from other parts of the world. What about plants? After you think about it, look at the bottom of the page for some examples. Think of some of the ways that plants or animals are introduced into new areas. Why do you think that some of these species are harmful when they become established in new areas?

Look at the different animals on this page. Connect four or more organisms in a food web. (Start with a plant.) Name several species in your backyard that are connected together in a food web. Start with the sun. Remember the differences between a food chain and a food web? Describe how the organisms in your food web are related. What eats what? Which species isn't eaten by any other animal? What might happen to the food web in your yard if the carnivores (meat-eaters) reproduced at a much higher rate than the herbivores (plant-eaters)? What would happen to the animals if the all the plants died?

There are many factors that can affect the number of a species. As a population grows or shrinks, it can have both a good or bad influence on other species in the food web. Next month, we'll look at some of the factors that influence population size.

Answers: Water hyacinth, kudzu, English sparrow, European starling, European carp, Gypsy moth, cattle egrets.



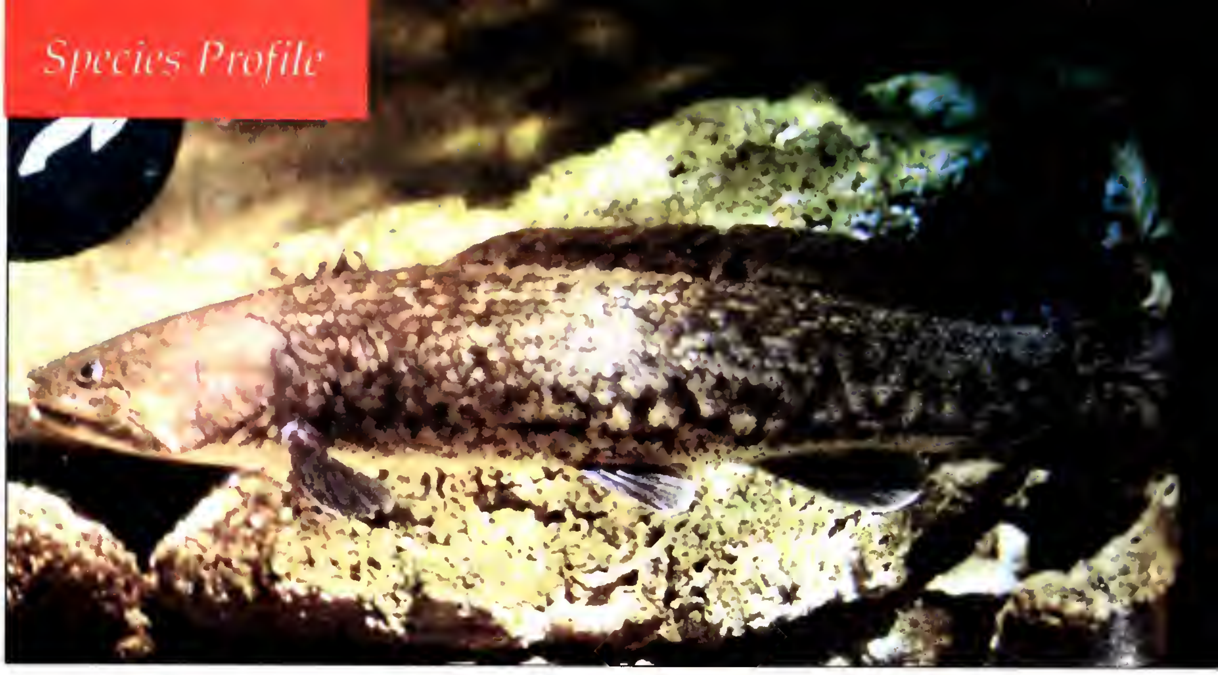


Photo courtesy of the Audubon Society

Bowfin

BY HOWARD ARCENEAUX

> *Bowfin are well-equipped to survive in all types of water. They frequent weedy shallow lakes, sluggish muddy streams, ditches, canals and backwater areas of Louisiana. They are abundant in bayous and overflow areas adjacent to the Mississippi River. They can be found in water conditions in which other freshwater species can barely survive.*

Little has changed about bowfin for the past 30 to 40 million years. Also known as choupique or grinnel, bowfin are among the most primitive fishes. Its ancestors can be traced to fossil remains found in the United States and Europe.

Bowfin (*Amia calva*) is the only species of the Amiidae family known to exist. It is found only in North America, east of the Rocky Mountains from Minnesota to Connecticut southward.

Bowfin are characterized by a flattened head, a rounded tail fin and a dorsal fin that runs its entire length. Their muscular, rounded bodies are a dark olive color that gradually fades to cream-colored bellies. Their jaws are armed with razor-sharp teeth that can inflict a severe bite when handled carelessly. Males have a black spot trimmed in yellow or orange at the upper base of their tails.

Bowfin have gradually been getting the respect from fishermen. The meat can be smoked, fried, baked, made into patties or boullettes (seasoned balls similar to hush puppies). Bowfin can flourish in water conditions where other species can barely survive. Like all fish, bowfin sometimes absorb the taste of the water in which they live. When caught in clear or running water where other gamefish exist, bowfin are fine for cooking. However, since these fish can live in stagnant or putrid waters, they absorb whatever odors that are in the water. This is the main reason bowfin have received an unjustified reputation.

Bowfin are distant cousins of sturgeon, paddlefish and garfish. The roe of sturgeon and paddlefish are the principle sources of caviar, while the eggs of garfish are not used to make caviar.

In recent years, bowfin roe has become an attractive alternative source because it can also be processed into caviar. The Louisiana Department of Wildlife and Fisheries recently enacted several commercial regulations to provide bowfin with adequate protection as its commercial roe fishery expands.

The bowfin is primarily a carnivore, feeding on crawfish, other fish, frogs and large aquatic insects. Peak spawning occurs during February and March. According to LDWF statistics, bowfin females produce an average of 7,000 eggs per pound of fish. After spawning is completed, the male guards the nest until the eggs hatch, usually in eight to 10 days.

Within two weeks, the small bowfin are ready to leave the nest. The adult male herds the brood in schools until the young fish are large enough to provide for themselves. The schools eventually break up when the young fish grow to three or four inches.

During the first year, bowfin usually reach 10 to 12 inches in length. They reach maturity at a length of 16 to 18 inches. A large bowfin is considered to be 14 to 16 pounds although the state record is more than 20 pounds.

Bowfin have another unique characteristic that allows them to survive in extremely shallow or nearly stagnant waters. They have an air bladder connected to their throats which serves as a lung. Other lung fishes curl up in mud when water goes out of their habitats and live on soggy air until the water body is replenished. Instead of being filled with gases, as is the case with these modern species, the bowfin's air bladder contains a network of blood vessels similar to those in higher vertebrates.

If the water supply becomes stagnant and loses its oxygen content, bowfin simply come to the surface and gulp in air like porpoises. Bowfin caught and left in boats for hours can survive when returned to the water thanks to this curious feature.

LAW LINES

Behind the Badge

BY CAPT. KEITH LaCAZE

Summer in Louisiana heralds the arrival of the boating season. LDWF agents are charged with the enforcement of boating regulations, no matter how minor the infraction.

But what are minor infractions, and how important is the enforcement of all regulations? A commentary on the subject appeared in the Baton Rouge *State Times* on August 6, 1991. It was written by Gordon Hutchinson and, with his permission, it is reprinted here.

Well, it finally happened. Inevitable, I guess.

After some 40 years of fishing, hunting and outdoor activities, I've been checked by Wildlife and Fisheries dozens of times. Never got a ticket. Not that I didn't deserve one sometimes, but it was always minor stuff. My wife's fishing license had just expired, for example. She goes fishing about once a year with me. The agent was understanding-everything else in the boat was in order-so he let us slide.

Several times I've been checked with my two boys in the boat (both under 13) and they weren't wearing their personal flotation devices (PFDs). But we weren't under way-just fishing with the trolling motor-and it's a V-hulled boat with high sides. I was warned they had to have them on when I cranked up, and they always did. So, I had gotten lax. But they're both 12, cautious with boats and good swimmers.

June 7- 8 we went up to Kincaid Lake outside of Alexandria. This is a beautiful 2,600 acre impoundment that reminds me of Arkansas: hardwood forests, wild azaleas and lots of dogwoods, just gorgeous in the spring. Plus it's in Kistachie National Forest, so the campground is run by the U. S. Forest Service. It's clean with camper hookups, courtesy pavilions, hot showers, toilets, all the amenities. Strictly a family atmosphere in the campground, and the USFS has even built a sandy swimming beach in a cove near the concrete boat landing.

Up in the coves the lake reminds me of Toledo Bend, with forests of dead trees extending skeleton-like from the water's surface. Great for bass, the lake is famous for huge crappie and bream. But maneuvering through those stumps can be a frustrating experience.

Saturday evening after a long day of boat riding, fishing and playing on the beach, the boys and I were up in a cove trying to catch anything. The fish weren't cooperating, so I decided to try a spot in the next cove.

It took about 20 minutes of aggravation to work the boat through the stumps with the trolling motor until I reached the edge of the open lake. Relieved at exiting the maze, I cranked up and made a big quarter-mile arc around the point to the next cove. I didn't make the boys put on their PFDs. After all, the motor wasn't running two minutes.

When I passed the outer portion of the arc and turned to head into the cove, I saw a boat parked in the shade on the point. Pulling past it, I saw the occupants weren't young lovers enjoying the evening calm on the water.

As I killed my engine, they cranked up and followed me into the cove.

"Uh-oh," my son said.

"Game Wardens," said my stepson. Both are masters of understatement.

They pulled up beside us in an old speed hull with an ancient Mercury outboard (really, Mr. Legislators, what our wildlife agents are forced to use for water transportation is an embarrassment to the state). No problem, I thought. Our boat, a 17-foot fish and ski, had the necessary horn, fire extinguisher and running lights-all in working order, I might add. And my fishing license was current. There is always an equal number of PFDs aboard for the number of passengers, and the boys are under 16, so they didn't need licenses.

There were two of them, an agent and his lieutenant. As they pulled up, the lieutenant looked into the boat.

"Yep, he's got'em," he said, "they're on the floor."

"How old are these boys, please sir?" the agent asked.

"They're both 12," I replied.

"Were you aware they should be wearing those life jackets when the boat's underway?"

Uh-oh again.

I won't go into the rest of it. They were polite, courteous and firm. I received a citation for violation of Louisiana Revised Statute 34:851.24, "Failure to have PFD while under way-under 13".

I was equally polite and courteous. After years of experience as a reserve law enforcement officer, I've given my share of tickets and I've received more than my share of static. And no, I didn't tell them about that. They didn't need that sort of static, either. And besides, I doubt it would have worked.

But the fine. Fifty-two bucks! Maybe I should have told them. The agent asked what I did for a living. That would have been the perfect opening.

As they drove away the kids wisely kept their thoughts to themselves as they rigged up, leaving me to start stewing. The nerve, I thought. Why be so hardcore? Everything else in the boat was correct. They must have had a quota to fill. Why weren't they out catching drug-dealers or something like that?

Then I started reflecting (and missed a strike). What if they had let me slide on that one infraction? What would I have done? I'll tell you what. I would have gone on doing things the way I've been doing them since the boys neared their teens, caving into their gripes that the PFDs are hot and uncomfortable. Just hit and miss on making them put them on for short runs, counting on the LDWF to let me slide. After all, if we went any distance, I always made them wear them.

When I was a kid, we had a horse we rode all the time. Cantankerous and spoiled, sometimes he took it in his head he wasn't going to take the bridle and bit.

One day, my dad, after about five minutes of head dodging and back-stepping by that horse, reared back and slugged him. Hit him like a man, right between the eyes with a closed fist. If you've ever dealt with horses, you probably know it takes more than a punch to hurt one. Actually, it takes something along the lines of a 2x4 to really have any lasting effect.

But as my dad stood there gritting his teeth, shaking his hand from the pain and his ignorance, the horse nearly fell backwards on his rear in surprise. He gave us no more trouble.

Since receiving the citation I've thought a lot about that horse, and what could have happened if we had hit a sunken object on one of those "short" runs and tossed one or all of us out of the boat. Now, when we crank the motor, we all slip on our PFDs without fail.

I guess, Agent Walker, wherever you are, I owe you one. You forced the bit with a 2x4. You gave me pause to do some serious thinking and start obeying the law completely. We do it all the time, now.

The alternatives are just too horrible to consider.

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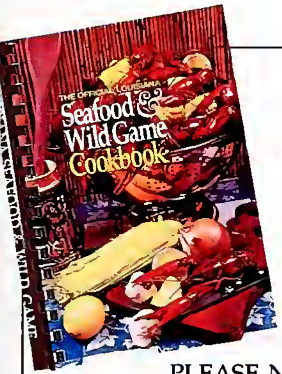

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Conservation Notes

LDWF Enforcement Agent Named to National Boating Safety Council

Lieutenant Colonel Charlie Clark, assistant chief of enforcement for the Department of Wildlife and Fisheries, was appointed to the U.S. Coast Guard's prestigious National Boating Safety Advisory Council. Clark is a 17-year veteran of LDWF's Enforcement Division and serves as Louisiana's boating law administrator. His appointment is especially gratifying to the department because it is a first for a Louisiana government official.

The National Boating Safety Advisory Council consists of 21 members representing state boating law administratiors, private boating interests, marine manufacturers and the Coast Guard. The council meets regularly to advise the Department of Transportation on recreational boating issues and makes recommendations for insuring safety on the nation's waterways.

U.S. Recreational Vessel Fees

Although the Department of Wildlife and Fisheries does not administer nor enforce the 1991 requirement for recreational vessels to purchase and display a special federal decal, numerous questions are received. The following are the pertinent facts concerning the decal:

1. All recreational boats (including non-motorized boats) 16 feet long or longer are required to purchase and display the decals. The cost is $25 for boats 16 feet long, but less than 20 feet. For boats 20 feet, but less than 27 feet, the decals cost $35. For boats 27, but less than 40 feet, the cost is $50. Decals for boats 40 feet in length or more cost $100.

2. The decals expire on December 31 of the year issued. If you purchased the decal when the requirement was enacted last fall, you will need to purchase new decals for 1992. Renewal notices or expiration warnings are not sent out by the federal government.

3. If you purchase a used boat with valid decals affixed, it is NOT necessary to purchase new decals until the following year.

4. The decals must be attached within six inches of the vessel registration number, or where the registration number would be located if required.

5. The only agency enforcing the decal requirement in Louisiana is the U.S. Coast Guard, and there is a civil penalty attached if a citation is received for failure to purchase or display decals.

5. Additional information about the Federal Recreational Vessel Fee is available by dialing 1-800-368-5647.

Re-establishment of Bald Eagles

Preliminary results of bald eagle nesting surveys conducted by the Louisiana Natural Heritage Program of the Department of Wildlife and Fisheries' Habitat Conservation Division indicate that bald eagles are on their way to recovery in Louisiana.

In 1973 Louisiana's nesting eagle population was down to five pairs, due to the effects of pesticide contamination. But this year, two new nests have been discovered, resulting in a total nesting population of at least 45 pairs. The department feels it is likely that this year's total will meet or exceed last year's record total of 47 pairs.

Although bald eagles are doing well in coastal Louisiana, with Terrebonne parish as the center of their distribution, eagles have been slow to expand into other regions of the state. In order to speed up the expansion, LDWF and the U.S. Fish and Wildlife Service are cooperating to establish one or more nesting pairs on Lake Ophelia National Wildlife Refuge near Marksville. One eaglet from up to 12 different nests will be removed and transported to Lake Ophelia. There they will be raised artificially and then released. Expectations of the plan will result in at least one pair of eagles returning to Lake Ophelia NWR to establish territory and provide the nucleus for further nesting.

First Aid Kits Donated

Region One Wildlife Enforcement Agents recently received first aid kits to help them cope with medical emergencies encountered in the performance of their duties. The equipment was donated to the agents by Willis-Knighton Medical Center in Shreveport. Chief Flight Nurse Roger Whitaker, EMT Richard Lazarus and Pilot Scott Smith presented the kits to Region One Commander Captain Duffy Gandy.

Wildlife Agents Annual Booster Drive

The Louisiana Wildlife Agents Association has launched its annual Booster Drive, with a special appreciation package for contributors. The Association is a non-profit organization formed by Louisiana's game wardens and all contributions are tax-deductible.

Contributions made to the Association will be dedicated to three "initiatives" for 1992, including: Support for a Beneficent Fund for the families of fallen officers, funding the Associations's annual Special Olympics participation, and funding the 1992 Annual Conference.

Contributions are being solicited by

telephone contacts, with varied appreciations packages including:

$25 - 99	Cap/bumper sticker/decal
$100 - 299	Above plus associate membership
$300 - 499	Above plus special edition Pen Set
$500 +	Above plus limited edition wildlife print

In addition, all contributions of $100 or more will also receive a free one-year subscription to The Louisiana Conservationist magazine. (Current subscribers receive automatic renewal.)

Additional information is available from Col. Charlie Clark at (504) 765-2988.

Artificial Reef Program Expands

Kirby Exploration of Texas has become the 11th company to participate in the Louisiana Artificial Reef Program (LARP). Kirby donated $364,610 to LARP, which is administered by the Department of Wildlife and Fisheries. The donated rig is in West Delta Block 134, about 30 miles southeast of Grand Isle.

Another expansion to LARP comes from the announcement by the Department of Wildlife and Fisheries for another artificial reef along the state's coast. Rick Kasprzak, coordinator for LARP, has applied to the Army Corps of Engineers for permission to proceed with the new project. The new project would be situated at Eugene Island about 80 miles south of Point-au-Fer in Terrebonne Parish. Counting the latest project, LARP in the last few weeks has applied for permission for six new sites. Seven reefs composed of 16 obsolete platforms are already in use.

LOWA Award Recipients

The Louisiana Outdoor Writer's Association has handed out several awards for various accomplishments in the field of conservation. Former state representative Ed Scogin, was been named the winner of the Louisiana Outdoor Writer's Association Arthur Van Pelt Award. Scogin has been involved in many issues affecting fishermen, hunters and other nature lovers. Most notably, Scogin has been credited with establishing the Louisiana Natural and Scenic Rivers System.

In a addition to the Arthur Van Pelt award, LOWA presented certificates of Commendation for outstanding contributions to Randy Lanctot, executive director of Louisiana Wildlife Federation and Nancy Jo Craig, director of the Louisiana Nature Conservancy.

The Arthur Van Pelt award is presented to individuals for a lifetime of accomplishments in the field of conservation. It is an award in the name of Arthur Van Pelt, a prominent outdoor writer in the 1940s from New Orleans.

World Record Longnose Gar

A 44 pound Longnose gar has been certified as the new 20 pound class world record by the International Game Fish Association. The fish was caught September 22, 1991 by Fred Elliot of Bossier City while fishing at Lake Bistineau in Bossier Parish. The fish struck a spinner bait made by Elliot.

Lifetime Licenses Holders

The following people have purchased the new Lifetime Sports License:

Thomas Bergstedt	LakeCharles
Robert Blereau	Morgan City
George Canaday	Lake Charles
Paul Domino	Bastrop
Scott Dufrene	Mathews
Wendell Franciol	Lafayette
Jarrod Gemar	Jonesville
Kenneth Harper	Lake Charles
Frank Houston	Winnsboro
Joel Isaac	Sulphur
Jimmy Lafitte	Shreveport
Tedford McCullough, IV	Baton Rouge
Sterrett McInnis	Minden
August Ohmstede	Baton Rouge
Gene Ohmstede, III	Baton Rouge
Gene Ohmstede, Jr.	Baton Rouge
Randolph Parks	Baton Rouge
Nolan Peters	Monroe
Jerry Polk, Jr.	Buras
Chad Thielen	Westlake
Bradley White	Bastrop
William Wiley	Jonesville

Project WILD Discovers the Marsh

Twenty-six Project WILD teachers from around the state now have firsthand knowledge about Louisiana's marshlands to share with their students.

The teachers attended an advanced workshop staged recently by the Department of Wildlife and Fisheries at the Rockefeller Wildlife Refuge on the Gulf coast at Grand Chenier.

Project WILD (Wildlife In Learning Design) is a supplementary wildlife education program for youngsters in grades kindergarten through 12. Approximately 3,200 teachers now participate in the program.

The group of teachers attending the workshop spent a weekend at Rockefeller Refuge adding to their knowledge of marshes, alligators and furbearing animals. Some of the topics discussed were the history of the marsh, current research projects and marsh management. Department biologists and staff donated their time for the workshop.

Louisiana Coastal Wetlands Workshop

The Fourth Annual Louisiana Coastal Wetlands Workshop will take place at Louisiana Universities Marine Consortium (LUMCON) in Cocodrie, Louisiana on May 23 and 24.

LUMCON's faculty and staff will join with guest speakers to discuss the causes of coastal wetland loss, what can be and what is being done. A boat tour of the marsh and a plane ride over the coast is scheduled for the participants of the workshop.

The weekend workshop is open to all on a first-paid basis. The number is limited and the fee is $85, which covers accommodations for Friday and Saturday nights, meals, lectures and field trips.

The Fourth Annual Louisiana Coastal Wetlands Workshop is sponsored by Orleans Audubon Society, The Louisiana Nature and Science Center, Women for Better Louisiana and LUMCON.

I Was Yuppie When Yuppie Wasn't Cool

FUNNY SIDE UP

BY GLYNN HARRIS

Artwork by Wayne Miller

We are living in the age of designer stuff. For instance, Ms. Claiborne's little girl, Liz, has made a mint with her line of ladies wear. And Ms. Lauren's little Ralphie is titillating olfactory senses, various and sundry other glands and heaven knows what else with his sensuous scents. They're slanted toward the young, upwardly mobile market; to the yuppies, in other words.

There are Rolex watches that cost a leg and the arm on which you wear them but, as far as I have been able to determine, their only function is to let me know what time it is. There are shoes and handbags of the brand that's a heckuva lot of fun to say. I can't let the word, "Gucci", roll off my tongue without feeling the urge to giggle right out loud. This reflex, of course, is brought on by the memory of when I was a baby and mama would poke her finger playfully at my little ribs.

I have to confess that all this state-of-the-art, with-it, designer stuff can be intimidating. I wear designer clothes, of course. Mine are designed by Ms. Walton's little boy, Sam. The scent I wear won't make the ladies smolder with ardor. However, it sometimes has that effect on rutting whitetail bucks. And I buy my footwear by watching the papers for the annual two-for-one sale down at Cheap Feet shoe store.

Ah, but I find yuppie food to be the great leveler. I may not wear a Rolex or Gucci, but I've eaten raw fish. Come to think of it, blackened fish has passed over my palate as well.

If you want to make a favorable impression with the young, upwardly mobile set, put on your Rolex and Gucci's and drop in to a sushi bar and dine on raw fish. Better yet, pretend you like it.

I've never visited a sushi bar, although I once ate some raw fish on a sand bar. My buddies and set out a trotline one night down at the Big Eddy. Our plan was to dine on whatever sustenance Mother Nature provided us. She was generous to a fault by giving us four mudcats and two inches of rain; a downpour that doused our fire before the fish had finished cooking. We ended up spearing chunks of sushi from the cold skillet for our supper.

I'm going to be quite frank with you. Raw fish doesn't do a thing for me. I'll pass up my shot at yuppiedom and take my southern fried, thank you.

Then there's blackened fish. Rumor has it that a New Orleans chef once burnt a batch of fish ala cajun and set it out back to cool before scraping it out in the garbage. A group of young, upwardly mobiles were touring Bourbon Street when they found the black-burnt fish. Assuming they had stumbled upon a new wave, designer entree, they sampled it, told their friends about it and, VOILA!, the blackened fish craze was born.

Shucks, we were eating blackened jackfish long before the more well-known blackened fish hysteria began. An old jackfish has so many tine bones the only way you can eat it is to burn it black so the bones dissolve.

I don't know how upwardly mobile this makes me, but when it comes to the latest in designer foods, I've been there.

I guess you could say that I was yuppie when yuppie wasn't cool.

Bayou Kitchen

by Wayne Miller

Photo by Ken Glaser

Lime Flounder with Dill and Rice

1	cup water
1/2	cup lime juice
1 1/2	tablespoon brown sugar
2	teaspoons dill weed
2	pounds flounder fillets
1	medium onion chopped
2	tablespoons olive oil
2	cups chicken stock or broth
1	cup raw rice
1/2	teaspoon oregano
1	teaspoon salt

Mix 1 cup water, lime juice, brown sugar and dill weed. Arrange fillets in baking dish as flat as possible and pour lime juice mixture over fish; cover and refrigerate approximately 2 hours.

Cook the onion in hot olive oil in heavy saucepan until tender. Do not brown. Add chicken stock, oregano and salt. Bring to boil. Stir in rice. Bring back to boil and reduce heat to very *low*. Cover and let cook 20 minutes. Remove from heat. Allow to stand 5 minutes before uncovering. Broil fish 4 inches from heat about 10 minutes or until fish easily flakes with fork. Serve fish over rice. Garnish with pimento if desired. Serves 4.

Broccoli and Red Bell Pepper Saute

1 3/4	pounds broccoli
1/4	cup olive oil
1	red bell pepper (cut in julienne style)
1/2	cup sliced green onion (including some of green tops)
2	tablespoons minced fresh parsley
1 1/2	tablespoon fresh lemon juice, Freshly ground pepper to taste

Cut off broccoli florets. Cut large florets in half lengthwise. Peel the stems and slice approximately 1/4 inch thick. Steam broccoli until just crisp-tender, about 4 minutes for florets and about 7 minutes for the stems. Rinse under cold water to stop cooking. Drain and pat dry with towel. Set aside. Heat olive oil in large heavy skillet over medium heat. Add red bell pepper. Saute until softened, about 5 minutes. Turn heat to high. Add broccoli, onions, parsley, juice, salt and black pepper and toss mixture until heated through. Serves 6.

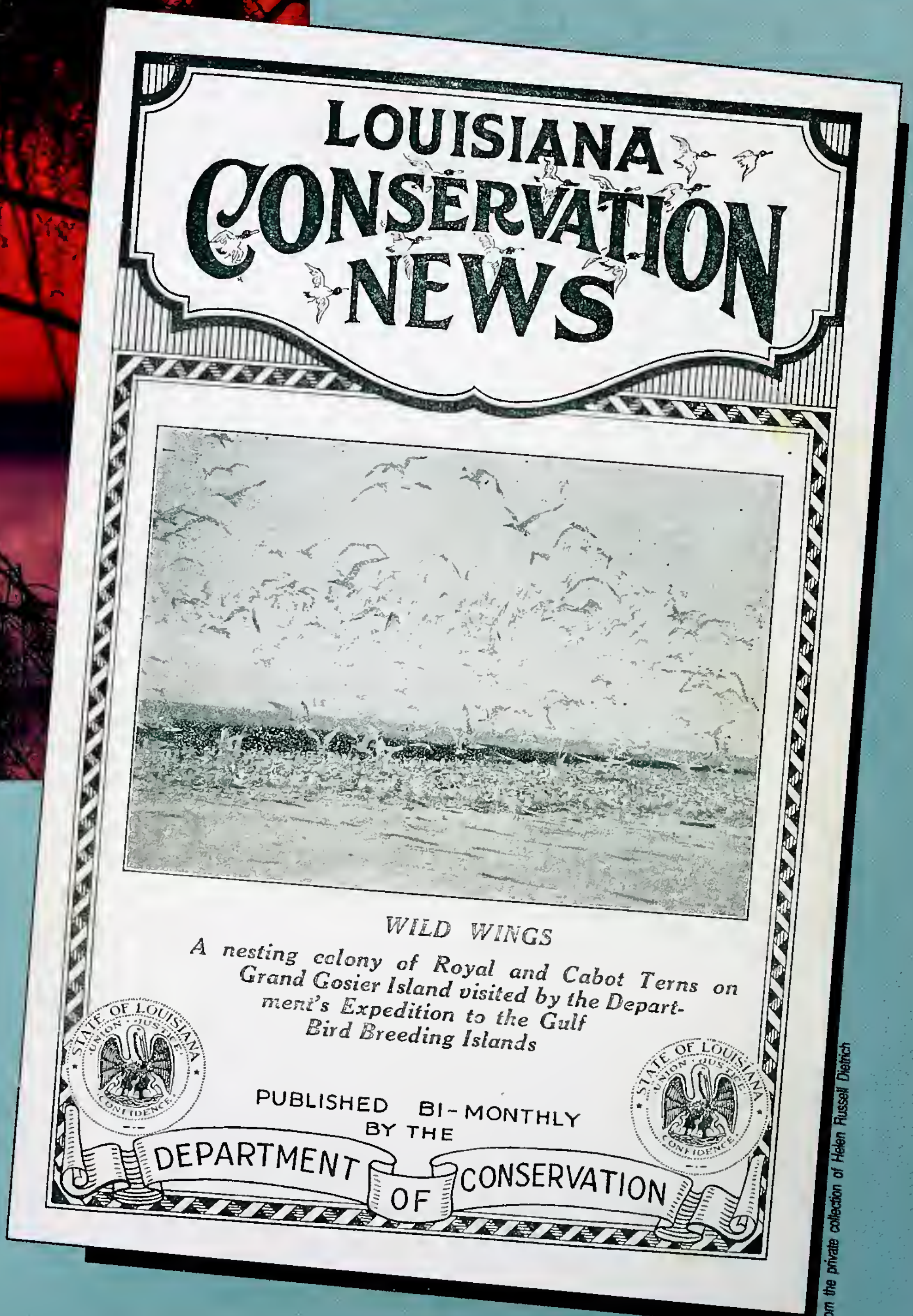
Scalloped Louisiana Oysters

3	tablespoons butter
3	tablespoons bread crumbs, seasoned
2	doz. large freshly shucked oysters, liquor reserved
2	cups whipping cream
1	teaspoon Worchestershire sauce
1/2	teaspoon hot pepper sauce
1/2	teaspoon freshly ground pepper salt to taste
1/2	cup soda cracker crumbs

Preheat oven to 400 F. Butter and flour gratin dish. Sprinkle with seasoned bread crumbs. Mix oyster liquor, and cream, Worchestershire sauce, hot sauce, pepper and salt. Add oysters to prepared dish. Top with cream mixture. Sprinkle cracker crumbs over top. Bake until cream bubbles and edges of oysters curl, about 15 minutes. Serve immediately. Serves 4.

LOUISIANA Conservationist

1992-93 CALENDAR



LOUISIANA CONSERVATION NEWS

WILD WINGS

A nesting colony of Royal and Cabot Terns on Grand Gosier Island visited by the Department's Expedition to the Gulf Bird Breeding Islands

PUBLISHED BI-MONTHLY BY THE DEPARTMENT OF CONSERVATION

From the private collection of Helen Russell Dietrich

September/October 1927
Volume 3 Number 1

The *Louisiana Conservationist* came into existence in January of 1923 as the pet project of Lucy Powell Russell. Russell was truly an "unsung hero" of the state's conservation history. She began her career in 1917 as secretary to the Commissioner of Conservation. At that time, it was the Department of Conservation, under the leadership of a Commissioner of Conservation, forerunner of today's Wildlife and Fisheries Commission. By the 20s, V.K. Irion was commissioner and, recognizing Russell's unique leadership and administrative ability, Dr. Irion appointed her as the first secretary of the entire department. She created the magazine under the title of *Louisiana Conservation News*, with the mission of informing and educating the public about the activities of the department and the many opportunities available for recreational and commercial utilization of Louisiana's natural resources. Seventy years later, that remains the mission of the *Louisiana Conservationist*.

In 1926, the magazine announced the state's first Anglers License, covering both salt and freshwater fishing, at a cost of $1. In 1928 the size limit on speckled trout was 12 inches, and redfish had a 16 inch minimum.

Above: Sunset on Lake Verret
Assumption Parish
Photo by Bob Dennie

Cover: Sunrise on Lake Verret
Assumption Parish
Photo by Bob Dennie

SEPTEMBER 1992

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		DMAP application deadline. *Alligator season opens this month.* 1	2	*First quarter moon* *Largemouth bass cruising again.* 3	*Time to make wreaths from native grape vines for decorating.* 4	5
6	*Labor Day* 7	*Dried bracts of the wild oak-leaf hydrangea still evident.* 8	9	10	11	*Full Moon* *Peak migration/staging of fulvous tree ducks in southwest Louisiana marshes and rice fields.* 12
Grandparents Day 13	*White shrimp begin Gulfward migration as water temperatures cool.* 14	*Commercial spotted seatrout season opens.* 15	*First cool fronts initiate movement of flounder, redfish, sheepshead and black drum from marsh ponds to deep waters.* 16	*Endangered Peregrine Falcons return to Louisiana from northern breeding grounds.* 17	18	*Last quarter moon* 19
Time to plant winter wheat food plots. 20	*Begin distribution of tags and records to DMAP cooperators.* 21	22	*Fall equinox, first day of fall.* *Peak spawning for redfish.* 23	*Archery and squirrel seasons approaching. Begin scouting.* 24	*Many species in sunflower family in bloom.* 25	*New moon* *National Hunting and Fishing Day* 26
27	*Rosh Hashanah* 28	29	30			

AUGUST 1992

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OCTOBER 1992

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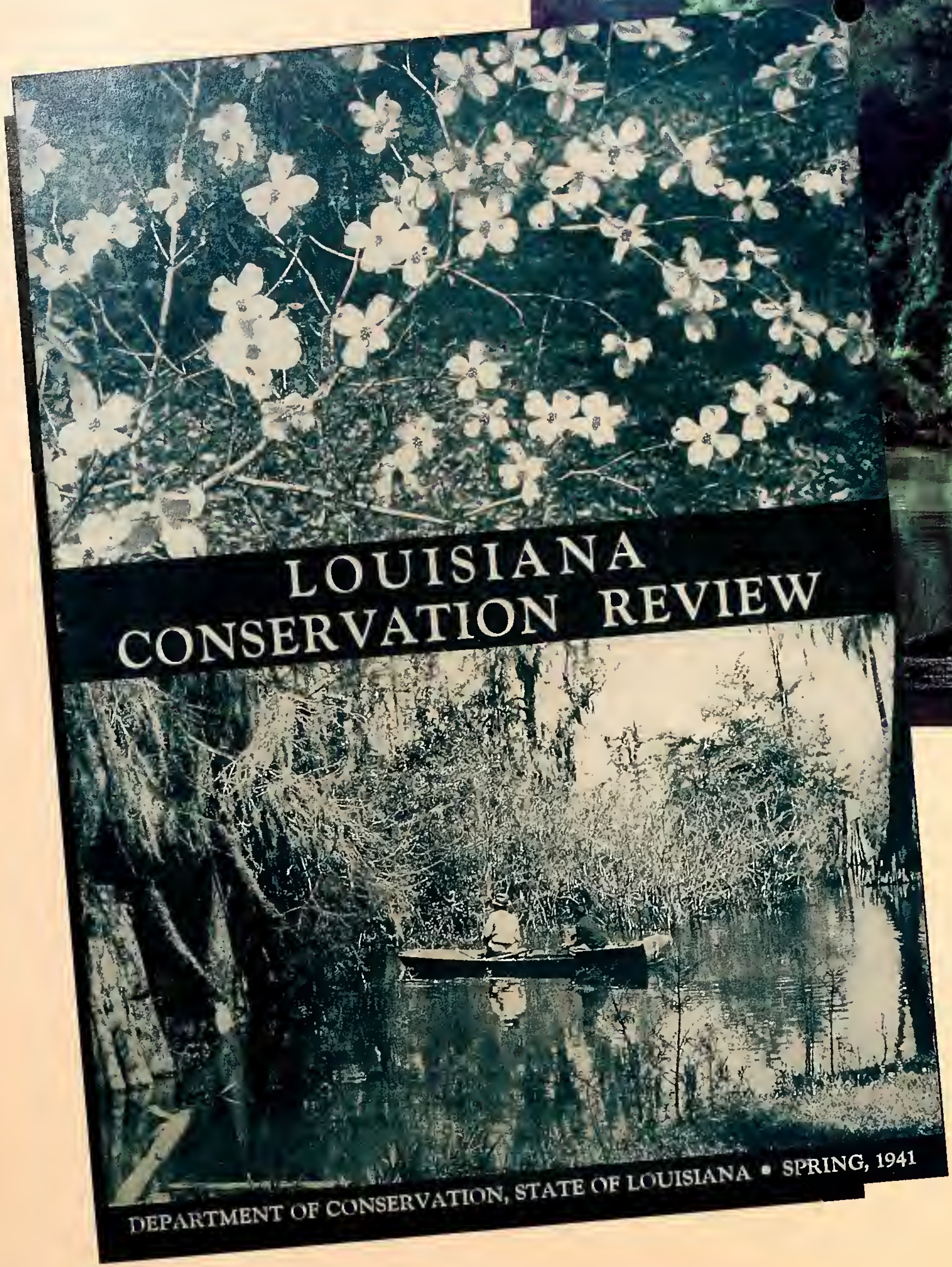


LOUISIANA
CONSERVATION REVIEW

DEPARTMENT OF CONSERVATION, STATE OF LOUISIANA • SPRING, 1941

By the end of the 1930s the magazine had become *The Louisiana Conservation Review*. It was a full-sized magazine of 40-50 pages, published quarterly. Much of Louisiana's wildlife was suffering decline and fledgling efforts were instituted to replenish some stocks. In 1936, the department started its first quail hatchery at Lacombe, producing 200 breeding pairs in 1938. A much larger quail hatchery would follow in Baton Rouge, located on the site of today's Wildlife and Fisheries Headquarters.

The 1940 Spring issue discussed blue crabs, with information on catching them, identifying the sexes, the molting process (soft shell crabs) and the thriving commercial crabbing industry.

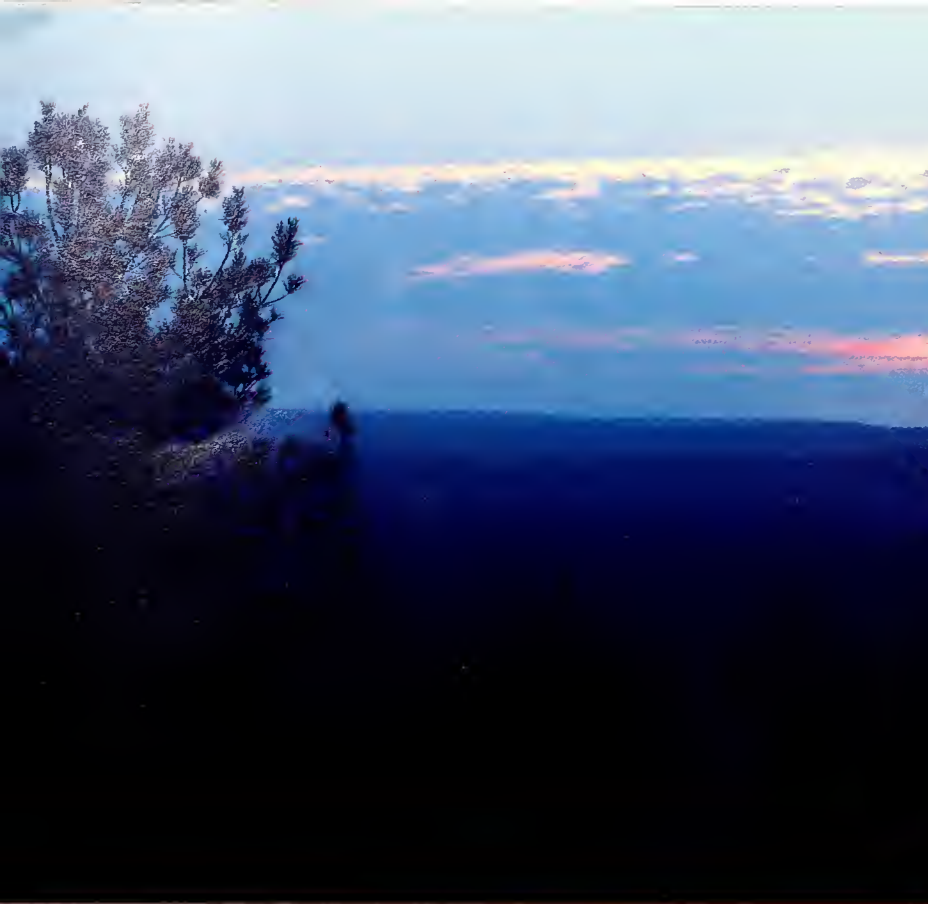
In 1941, Louisiana's conservation agents, predecessors of today's wildlife enforcement agents, received their first actual training in law enforcement techniques.

By the end of that year, Louisiana and the nation would be embroiled in the Second World War.

Tensas River, Tensas Wildlife Refuge
Tensas/Madison Parish
LDWF Photo

OCTOBER 1992

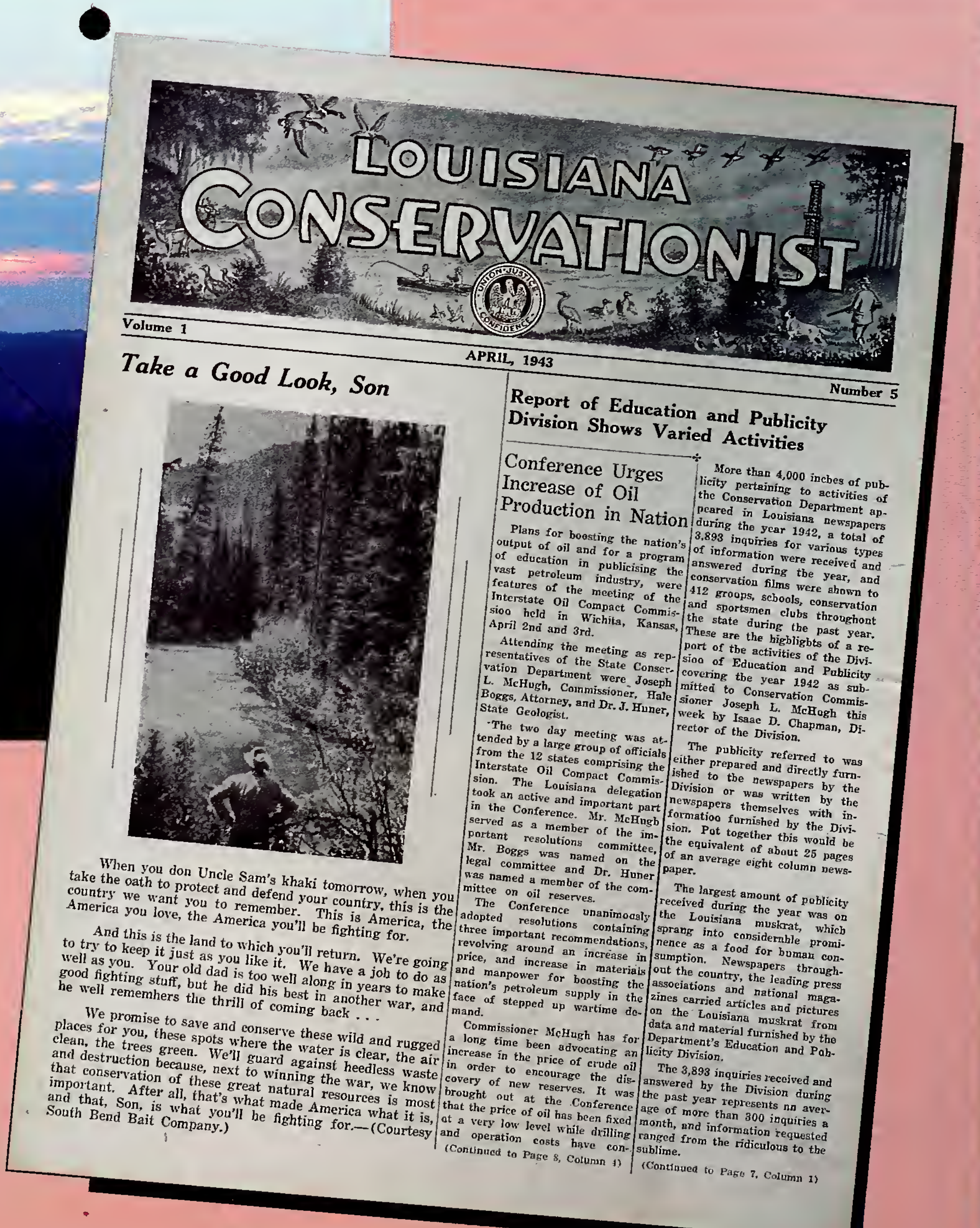
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
SEPTEMBER 1992 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	NOVEMBER 1992 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30			*Initial snow and white-fronted geese arrive in southwest Louisiana.* *Archery and commercial hunting preserve seasons open.* 1	*Brown shrimp begin spawning offshore.* *Gulf sturgeon migrate out of rivers to gulf waters.* 2	*First quarter moon* *Rabbit and squirrel seasons open.* 3
Crane-fly orchid flowers blend with leaf litter in mesic hardwood forests. 4	5	*Largemouth bass and sac-a-lait feeding heavily.* 6	*Yom Kippur* 7	*Bald Eagles return to Louisiana to begin nesting.* 8	9	*Brown pods of the rare wild coco orchid evident in upland longleaf pine sites.* 10
Full moon *and seatrout quit spawning.* 11	*Columbus Day* 12	*Begin flooding rice fields and greentrees for waterfowl.* 13	*Speckled trout and redfish move to upper estuary.* *Sight-in rifles for approaching deer season.* 14	*Woodcock begin to appear in Louisiana.* *Commercial mullet season opens.* 15	*Menhaden season closes.* *Oysters begin to store glycogen and fatten as water temperatures cool.* 16	*The azure blue flowers of the soapwort gentian can be found along small creeks in the pinelands.* *Fall shuffle for quail completed.* 17
Flood crawfish ponds. 18	*Last quarter moon.* 19	*Secretive Yellow Rails arrive this month to spend the winter in southwestern Louisiana fields and marshes.* 20	*Large flounder concentrate along barrier islands before migrating.* *Largemouth bass move into shallows at Toledo Bend.* 21	*Major migration activity for waterfowl.* 22	23	*Look for ripe persimmons in upland forests and fields.* *Early youth hunts on selected WMA's.* 24
New Moon *Daylight Saving Time ends.* *Summer officially ends.* 25	*Large cones of longleaf pine release seeds.* *Statewide quail surveys begin.* 26	27	28	*First platform donated in 1987 to Louisiana's Articial Reef Program.* 29	*If you don't want to maintain hummingbird feeders throughout the winter, they should be removed now.* 30	*Halloween* 31



The far reaching effects of the nation's massive committment to war were all too obvious. The magazine became a 6-8 page tabloid, printed on newsprint. For the first time, it bore the title of *The Louisiana Conservationist*, and the tone of the publication reflected the concerns of the day. Waterfowl hunters were asked to save the feathers of ducks and geese for use in making insulated flight suits for the airmen of the Army Air Corps.

By 1943, ammunition for sporting purposes was hard to find indeed. One recommendation to the War Production Board called for each licensed hunter to be allowed to purchase one box of 25 shotgun shells and one box of twenty rifle cartridges! Feature articles included marksmanship tips to enable sportsmen to "get the most out of what ammuniition is available."

And, of course, *The Louisiana Conservationist* did its share of patriotic morale boosting with articles such as "Take A Good Look, Son."



LOUISIANA CONSERVATIONIST

Volume 1 APRIL, 1943 Number 5

Take a Good Look, Son

When you don Uncle Sam's khaki tomorrow, when you take the oath to protect and defend your country, this is the country we want you to remember. This is America, the America you love, the America you'll be fighting for.

And this is the land to which you'll return. We're going to try to keep it just as you like it. We have a job to do as well as you. Your old dad is too well along in years to make good fighting stuff, but he did his best in another war, and he well remembers the thrill of coming back . . .

We promise to save and conserve these wild and rugged places for you, these spots where the water is clear, the air clean, the trees green. We'll guard against heedless waste and destruction because, next to winning the war, we know that conservation of these great natural resources is most important. After all, that's what made America what it is, and that, Son, is what you'll be fighting for.—(Courtesy South Bend Bait Company.)

Report of Education and Publicity Division Shows Varied Activities

More than 4,000 inches of publicity pertaining to activities of the Conservation Department appeared in Louisiana newspapers during the year 1942, a total of 3,893 inquiries for various types of information were received and answered during the year, and conservation films were shown to 412 groups, schools, conservation and sportsmen clubs throughout the state during the past year. These are the highlights of a report of the activities of the Division of Education and Publicity covering the year 1942 as submitted to Conservation Commissioner Joseph L. McHugh this week by Isaac D. Chapman, Director of the Division.

The publicity referred to was either prepared and directly furnished to the newspapers by the Division or was written by the newspapers themselves with information furnished by the Division. Put together this would be the equivalent of about 25 pages of an average eight column newspaper.

The largest amount of publicity received during the year was on the Louisiana muskrat, which sprang into considerable prominence as a food for human consumption. Newspapers throughout the country, the leading press associations and national magazines carried articles and pictures on the Louisiana muskrat from data and material furnished by the Department's Education and Publicity Division.

The 3,893 inquiries received and answered by the Division during the past year represents an average of more than 300 inquiries a month, and information requested ranged from the ridiculous to the sublime.

(Continued to Page 7, Column 1)

Conference Urges Increase of Oil Production in Nation

Plans for boosting the nation's output of oil and for a program of education in publicising the vast petroleum industry, were features of the meeting of the Interstate Oil Compact Commission held in Wichita, Kansas, April 2nd and 3rd.

Attending the meeting as representatives of the State Conservation Department were Joseph L. McHugh, Commissioner, Hale Boggs, Attorney, and Dr. J. Huner, State Geologist.

The two day meeting was attended by a large group of officials from the 12 states comprising the Interstate Oil Compact Commission. The Louisiana delegation took an active and important part in the Conference. Mr. McHugh served as a member of the important resolutions committee, Mr. Boggs was named on the legal committee and Dr. Huner was named a member of the committee on oil reserves.

The Conference unanimously adopted resolutions containing three important recommendations, revolving around an increase in price, and increase in materials and manpower for boosting the nation's petroleum supply in the face of stepped up wartime demand.

Commissioner McHugh has for a long time been advocating an increase in the price of crude oil in order to encourage the discovery of new reserves. It was brought out at the Conference that the price of oil has been fixed at a very low level while drilling and operation costs have con-

(Continued to Page 8, Column 1)

Kisatchie National Forest
Natchitoches Parish
LDWF Photo

NOVEMBER 1992

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
All Saints Day *Renewals sent to commercial license holders.* 1	*First quarter moon* 2	*Election Day* 3	4	*Catahoula Lake beginning to flood.* 5	6	*Rut underway in Area 2.* *Sumac leaves turn scarlet red.* 7
Oyster spawning and redfish spawning ends. *Seabobs begin appearing along coast.* 8	*Largemouth bass moving away from bank.* 9	*Full moon* *Stock bluegill in new or renovated farm ponds.* 10	*Veterans Day* *Fall waterfowl migration in full swing with mallards and diving ducks arriving.* 11	12	13	*Late season youth hunts on selected WMAs.* 14
Trapping season approaching. *Begin issuing commercial licenses for 1992.* 15	16	*Last quarter moon* 17	*Large flounder increasingly available for gigging along the coastal barrier islands.* 18	19	20	21
22	*Big blue stem and indian grass sway ornately in Louisiana prairies.* 23	*New moon* 24	*Common Goldeneyes return to coastal Louisiana.* 25	*Thanksgiving Day* *Quail season opens.* 26	27	*Hardhead catfish emigrate from inshore waters.* 28
29	30					

OCTOBER 1992

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DECEMBER 1992

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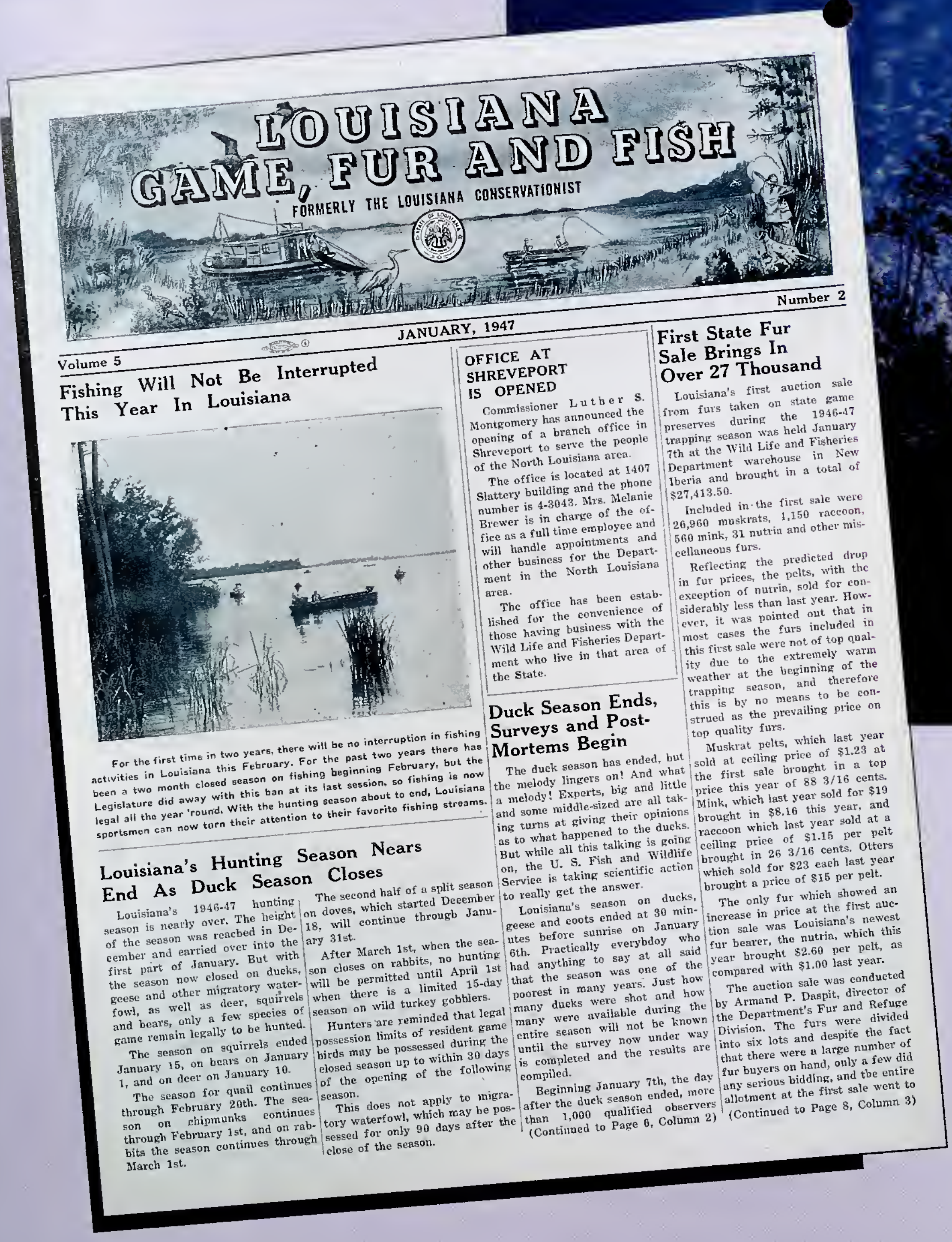
Report Poachers 1-800-442-2511



LOUISIANA GAME, FUR AND FISH

FORMERLY THE LOUISIANA CONSERVATIONIST

Volume 5 JANUARY, 1947 Number 2

Fishing Will Not Be Interrupted This Year In Louisiana

For the first time in two years, there will be no interruption in fishing activities in Louisiana this February. For the past two years there has been a two month closed season on fishing beginning February, but the Legislature did away with this ban at its last session, so fishing is now legal all the year 'round. With the hunting season about to end, Louisiana sportsmen can now turn their attention to their favorite fishing streams.

Louisiana's Hunting Season Nears End As Duck Season Closes

Louisiana's 1946-47 hunting season is nearly over. The height of the season was reached in December and carried over into the first part of January. But with the season now closed on ducks, geese and other migratory waterfowl, as well as deer, squirrels and bears, only a few species of game remain legally to be hunted.

The season on squirrels ended January 15, on bears on January 1, and on deer on January 10.

The season for quail continues through February 20th. The season on chipmunks continues through February 1st, and on rabbits the season continues through March 1st.

The second half of a split season on doves, which started December 18, will continue through January 31st.

After March 1st, when the season closes on rabbits, no hunting will be permitted until April 1st when there is a limited 15-day season on wild turkey gobblers.

Hunters are reminded that legal possession limits of resident game birds may be possessed during the closed season up to within 30 days of the opening of the following season.

This does not apply to migratory waterfowl, which may be possessed for only 90 days after the close of the season.

OFFICE AT SHREVEPORT IS OPENED

Commissioner Luther S. Montgomery has announced the opening of a branch office in Shreveport to serve the people of the North Louisiana area.

The office is located at 1407 Slattery building and the phone number is 4-3043. Mrs. Melanie Brewer is in charge of the office as a full time employee and will handle appointments and other business for the Department in the North Louisiana area.

The office has been established for the convenience of those having business with the Wild Life and Fisheries Department who live in that area of the State.

Duck Season Ends, Surveys and Post-Mortems Begin

The duck season has ended, but the melody lingers on! And what a melody! Experts, big and little and some middle-sized are all taking turns at giving their opinions as to what happened to the ducks. But while all this talking is going on, the U. S. Fish and Wildlife Service is taking scientific action to really get the answer.

Louisiana's season on ducks, geese and coots ended at 30 minutes before sunrise on January 6th. Practically everybdoy who had anything to say at all said that the season was one of the poorest in many years. Just how many ducks were shot and how many were available during the entire season will not be known until the survey now under way is completed and the results are compiled.

Beginning January 7th, the day after the duck season ended, more than 1,000 qualified observers

(Continued to Page 6, Column 2)

First State Fur Sale Brings In Over 27 Thousand

Louisiana's first auction sale from furs taken on state game preserves during the 1946-47 trapping season was held January 7th at the Wild Life and Fisheries Department warehouse in New Iberia and brought in a total of $27,413.50.

Included in the first sale were 26,960 muskrats, 1,150 raccoon, 560 mink, 31 nutria and other miscellaneous furs.

Reflecting the predicted drop in fur prices, the pelts, with the exception of nutria, sold for considerably less than last year. However, it was pointed out that in most cases the furs included in this first sale were not of top quality due to the extremely warm weather at the beginning of the trapping season, and therefore this is by no means to be construed as the prevailing price on top quality furs.

Muskrat pelts, which last year sold at ceiling price of $1.23 at the first sale brought in a top price this year of 88 3/16 cents. Mink, which last year sold for $19 brought in $8.16 this year, and raccoon which last year sold at a ceiling price of $1.15 per pelt brought in 26 3/16 cents. Otters which sold for $23 each last year brought a price of $15 per pelt.

The only fur which showed an increase in price at the first auction sale was Louisiana's newest fur bearer, the nutria, which this year brought $2.60 per pelt, as compared with $1.00 last year.

The auction sale was conducted by Armand P. Daspit, director of the Department's Fur and Refuge Division. The furs were divided into six lots and despite the fact that there were a large number of fur buyers on hand, only a few did any serious bidding, and the entire allotment at the first sale went to

(Continued to Page 8, Column 3)

In 1947 the war was over, Jimmie Davis was Governor, and the magazine had been renamed once again. This time, it was the *Louisiana Game, Fur, and Fish*. It would be yet another year before it became a "real magazine".

For two years, there had been a closed season on all fishing during February and March, but that was repealed in '47. During the war, hunting license sales had fallen to about 125,000. That was about to change. Of primary concern to the department and to sportsmen was the question, "What has happened to the ducks?" It was the beginning of the Duck Dilemma that faces us today. The U.S. Fish and Wildlife Service decided for the first time to broaden its annual duck census/survey to a continental base, rather than the usual national limits.

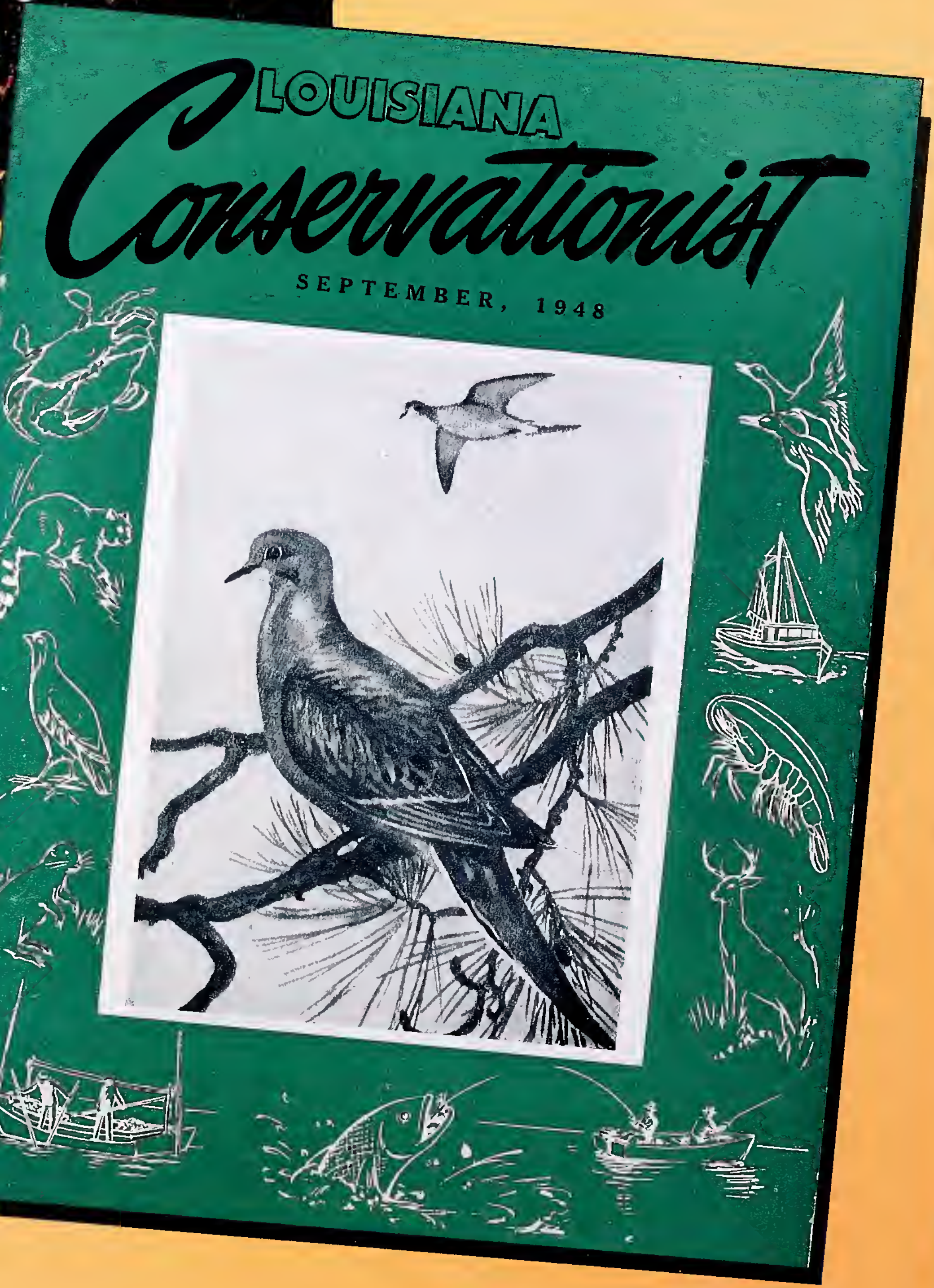
On the bright side, the department held its first auction of furs taken from game preserves (Wildlife Management Areas) and the sale brought in more than $27 thousand.

Atchafalaya Basin
Photo by Bob Dennie

DECEMBER 1992

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		Postlarval striped mullet hit beaches from offshore. 1	*First quarter moon* 2	*Canada geese begin arriving in southwest Louisiana.* 3	4	*Special handicapped season on Sherburne WMA, Dec. 5-6.* 5
Pheasant season closes. *Either-sex deer muzzleloading season on selected WMA's.* 6	*Brown Pelicans begin nesting on Queen Bess island.* 7	*Sheepshead catches increase with low tidal conditions.* 8	*Full moon* 9	*Time to perform annual maintenance on Wood Duck boxes and make necessary repairs.* 10	*Freshwater trout stocking in selected areas.* 11	*Oyster mushrooms fruiting on willows.* 12
13	*Nationwide Christmas bird counts begin.* 14	*Clusters of mistletoe evident in deciduous hardwood trees.* 15	*Last quarter moon* 16	17	18	*Deer rut underway in area 1.* 19
Chanukah *Squirrels begin their rut.* 20	*Winter solstice, first day of winter.* 21	22	23	*Christmas Eve* *New moon* 24	*Christmas Day* 25	26
27	*Recycle Christmas trees for marsh management or mulch.* 28	29	30	*New Year's Eve* *1992 commercial licenses expire. Please renew early.* 31	NOVEMBER 1992 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	JANUARY 1993 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Report Poachers 1-800-442-2511



LOUISIANA

Conservationist

SEPTEMBER, 1948

In September of 1948 the *Louisiana Conservationist* was once again a true magazine format publication and, this time, the title would stick. It was the beginning of what came to be known as the Glory Days for the department, which had been re-named the Department of Wild Life and Fisheries.

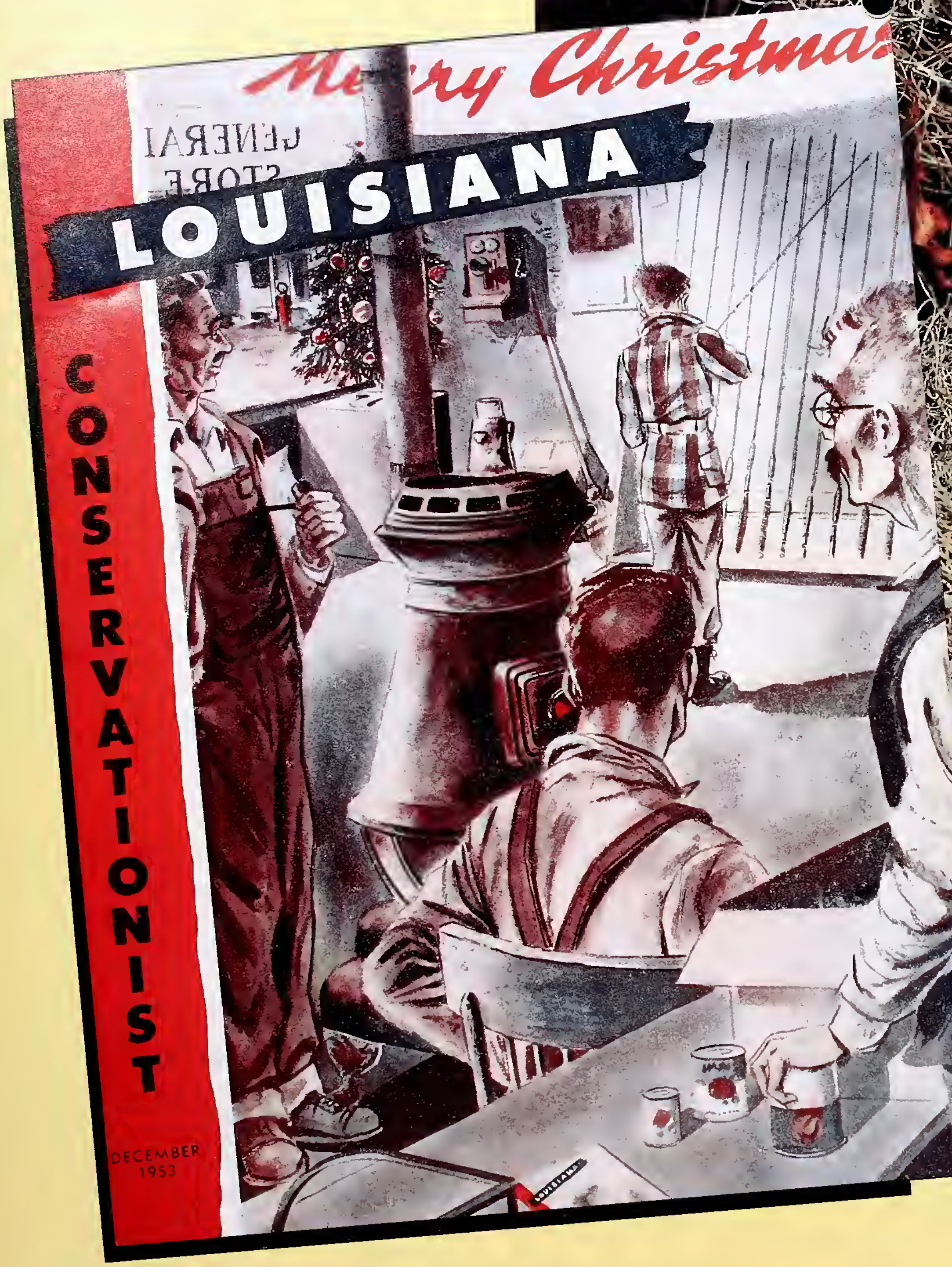
The Duck Dilemma, which would be "hot news" in the 1980s, was a bitter reality. In 1948 there was a four-duck daily bag limit with a thirty-day season.

Governor Earl Long took the unprecedented step of "insuring" sport hunting by sponsoring and supporting legislation to provide $150 thousand in each year of his administration to "...replenish the dwindling numbers of quail, wild turkey, deer and game fish." The program was pursued to success beyond the dreams of the originators. The state now has more deer and wild turkeys than ever before and our fisheries remain the most robust in the nation.

Pomme de Terre Wildlife Management Area
Avoyelles Parish
LDWF Photo

JANUARY 1993

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
DECEMBER 1992 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	FEBRUARY 1993 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28				*New Year's Day* *First quarter moon* *Woodcock numbers peak in the state.* 1	*Peak waterfowl numbers in coastal Louisiana.* 2
LDWF begins annual bald eagle nest surveys. 3	*Peak deer breeding time in Atchafalaya Basin.* 4	*Red maple begins blooming this month.* 5	*Crappie appear in river channel at Toledo Bend.* 6	*Resident great horned owls nesting.* 7	*Full moon* *Bright red berries persist on dormant deciduous holly in forests and along fence rows.* 8	*Endangered Louisiana pearlshell reproduces in cold water creeks in central Louisiana.* 9
10	11	*Large schools of crappie congregate in deep water.* 12	*Early nesting Wood Ducks begin their search for tree cavities.* 13	*Striped bass migrate up Mississippi and Atchafalaya rivers.* 14	*Last quarter moon* *Brown shrimp post-larvae begin entering the estuaries* 15	*Male Woodcock can be seen and heard in courtship flights.* 16
17	*Martin Luther King Day* 18	*Woodcock begin leaving the state for northern nesting grounds.* 19	*Archery season closes.* 20	21	*New moon* *Blueberry-like blossums of Elliott's huckleberry begin to open.* 22	23
Squirrel season closes. (31) 24/31	*Clean and repair Purple Martin nest boxes in anticipation of first arrivals in early February.* 25	26	27	28	29	*First quarter moon* 30



In 1953 the *Louisiana Conservationist* got a new look with a redesigned cover. The young editor at the time was Claude H. Gresham, Jr. who, with the unlikely nickname of "Grits," would go on to be a nationaly prominent outdoor writer and a specialist in the shooting sports.

Public facilities at the Pass-A-Loutre Public Hunting Grounds accomodated 12 hunters daily for a fee of $10/person. In 1954 the facilities could accomodate 72 hunters a day in nine separate camps. Commission (department) boats transported hunters to and from the Venice docks and the camps were outfitted with duckboats, pirouges and decoys. Hunters had only to bring their food, guns and shells.

In retrospect, the January 1955 issue touted a "promising new fishery" for the Gulf of Mexico. "Let's not miss the boat," the article stated. It detailed an experimental trip aboard a U.S. Fish and Wildlife Service vessel to test the Japanese Long Line fishing technique.

Sac-a-lait from Lake Boeuf
Lafourche Parish
Photo by Bob Dennie

FEBRUARY 1993

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	*Groundhog Day* *Crabs in berry stage found along beaches.* 2	*Gulf sturgeon enter rivers to find suitable spawning habitat.* *New Orleans Boat Show (Feb. 3-7)* 3	4	*Virginia opossums give birth this month.* *LOBO Boat and Sportsman Show (Baton Rouge Feb. 5-7)* 5	*Full moon* *Male largemouth bass move to shallows.* 6
Sac-a-lait fishing going full blast. 7	*Sand seatrout begin spawning.* 8	*Bright golden blossoms of the herb yellow top blanket field and roadsides.* 9	*Peak recruitment for juvenile southern flounder in Calcasieu.* 10	11	*Lincoln's Birthday* *Clean and repair Eastern Bluebird nest boxes.* 12	*Last quarter moon* 13
St. Valentine's Day *Brown shrimp post larvae begin moving northward through tidal passes.* 14	*Presidents Day* *Deadline for submitting DMAP harvest records.* 15	*Explosive "waagh" calls of eastern spadefoot toads heard around ponds formed after heavy rains.* 16	*Good pre-spawn largemouth bass fishing.* 17	18	*White bass begin spawning.* 19	20
New moon *Sac-a-lait schools breaking up.* 21	*Washington's Birthday* *Bees frequent blossoms of spring beauty in grassy areas.* 22	*Mardi Gras* 23	*Ash Wednesday* *Cover entrance to chimney if you do not enjoy the twittering of nesting chimney swifts.* 24	*Nine-banded armadillos give birth this month.* 25	*Big largemouth bass begin biting on crawfish at Toledo Bend.* 26	*Langlois violets blooming.* 27
Quail and rabbit seasons close. *Wintering geese begin northward migration.* 28					JANUARY 1993 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	MARCH 1993 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

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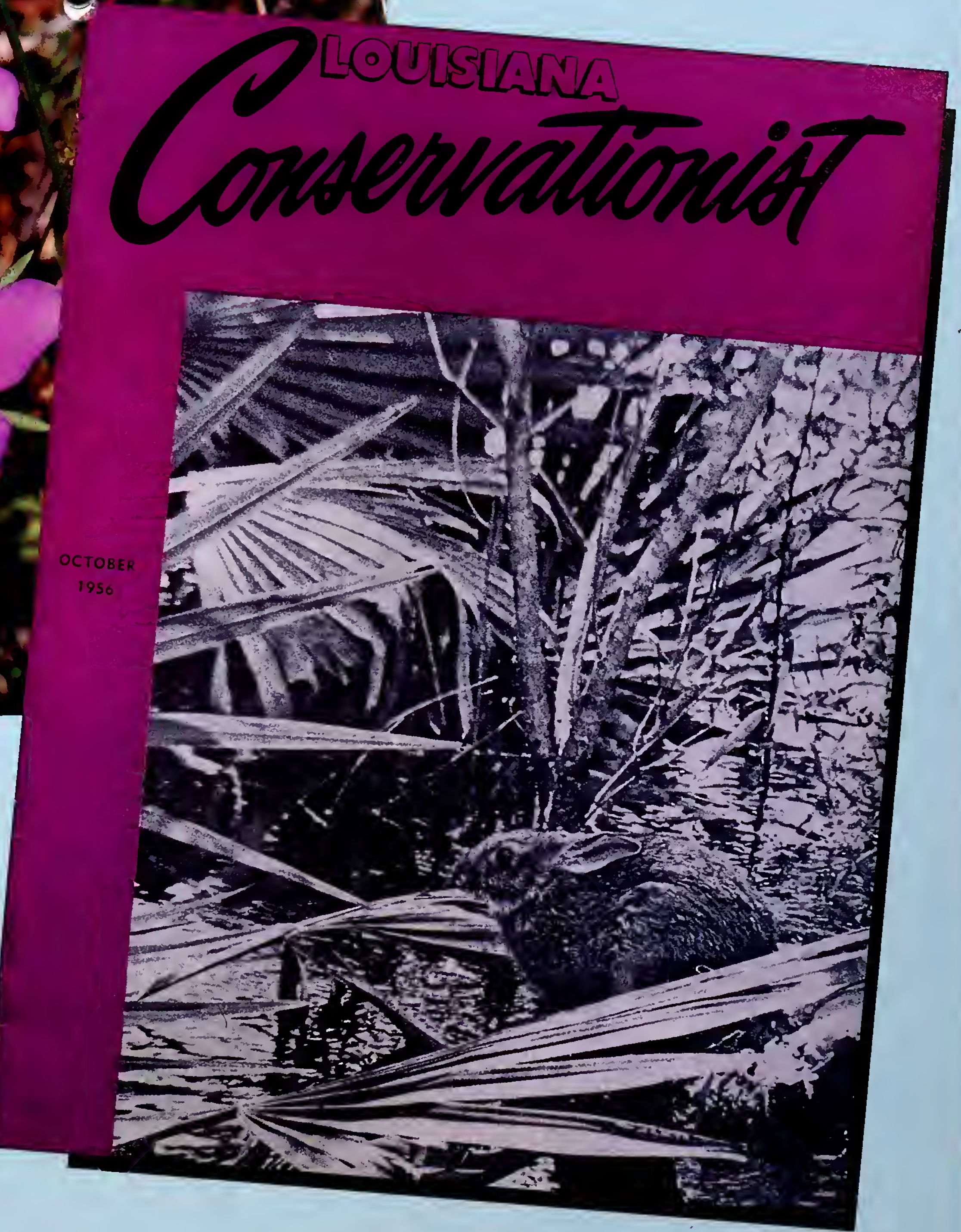

LOUISIANA

Conservationist

OCTOBER

1956

Once again, the cover was redesigned in 1956. Although the overall content of the magazine remained largly unchanged, there was more awareness of the dangers of pollution and the wasteful depletion of resources.

In 1958 a new state boating safety law provided the first legal proscription against operating a boat while intoxicated. A Federal Boating Safety Law signed by President Eisenhower that same year required the registration and numbering of all boats powered by motors of ten horsepower or more.

Department boats, aircraft and vehicles had been outfitted with 2-way radio; the much maligned nutria was finally recognized as the potential salvation of the state's hard pressed fur trapping industry; widespread and increasing pollution of oyster beds was a growing concern; and the disastrous natural crawfish crop of 1959 would spark the opening of the state's first experimental commercial crawfish farm at Cecelia in October of that year.

Cameron Parish
Photo by Latimore Smith

MARCH 1993

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	First quarter moon *Start fertilizing farm ponds.* 1	*Begin drawdown of flooded areas managed for waterfowl.* 2	*Large spawning size black drum enter estuaries.* 3	*Largemouth bass begin nesting* 4	*White shrimp begin moving into estuaries from offshore.* 5	*Initial wood duck broods begin to appear.* 6
Pink shrimp begin appearing in Chandeleur Sound. 7	*Full moon* *Paddlefish begin spawning.* 8	*Pine and oak pollen released.* 9	*Louisiana Sportsman Show in New Orleans (March 10-14)* 10	*Coastal migratory species such as Florida pompano and Spanish mackerel begin arriving along the beaches.* 11	*Mottled Ducks begin nesting on coast.* 12	13
Clean and hang up hummingbird feeders with solution of four parts water and one part sugar. 14	*Last quarter moon* 15	*Eastern Bluebirds begin building nests.* 16	*St. Patrick's Day* 17	*Peak black drum spawning.* *Speckled trout move into lower bays.* 18	*Peak of Wood Duck nesting.* 19	*Spring equinox, first day of spring.* *Turkey season opens in Area B.* 20
21	22	*New moon* *Overwintering white shrimp begin moving into Calcasieu Lake.* 23	*Largemouth bass begin spawning.* 24	*Quail coveys begin breakup.* 25	*Northern Parula Warblers return to Louisiana this month from their wintering grounds in the Caribbean and Central America.* 26	*Turkey season opens in Area A.* 27
28	29	*Tubular red and yellow flowers of red buckeye visited by hummingbirds.* 30	*First quarter moon* 31		FEBRUARY 1993	APRIL 1993

FEBRUARY 1993

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APRIL 1993

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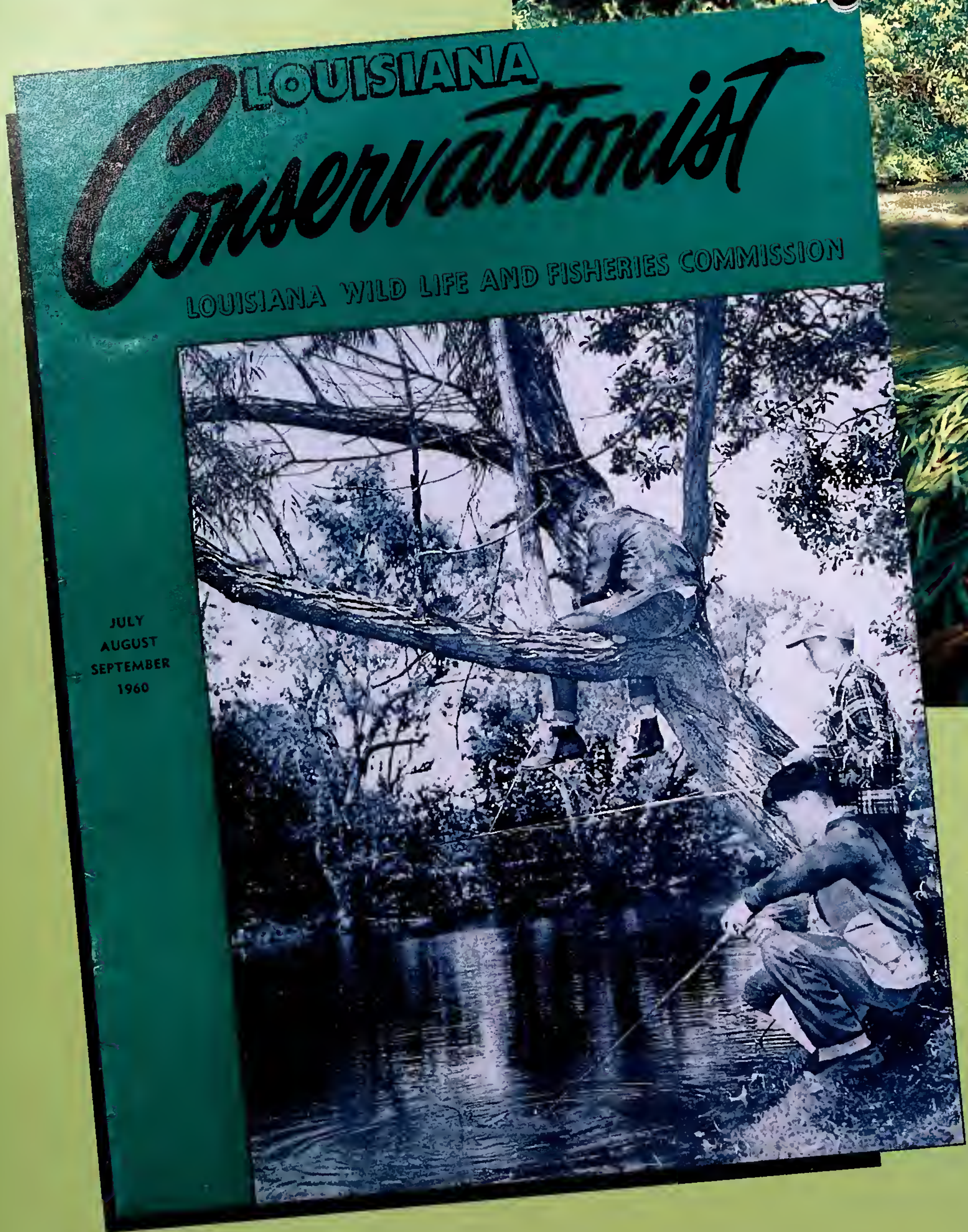
Report Poachers 1-800-442-2511


LOUISIANA
Conservationist
LOUISIANA WILD LIFE AND FISHERIES COMMISSION
JULY
AUGUST
SEPTEMBER
1960

Another minor change in the magazine's cover in 1960 escaped the attention of many readers. It was the addition of a single line below the title adding the then-current department name to the magazine. It would be dropped before the decade ended.

In 1960 the department released a new movie, complete with sound and full color, titled "Louisiana Oyster Fisherman."

At Holly Beach, a fishing pier opened to the public. It reached 660 feet from the beach into the Gulf of Mexico and was the first such fishing pier on the Louisiana coast. According to the magazine, entrance cost one dollar, bait another half-a-dollar.

The department's Wild Turkey Restoration Program was a glowing success. The development of the cannon net made the capture of adult wild turkeys practical and the program gathered momentum. Hunting was possible in twelve parishes, for gobblers only, with a daily/season limit of one bird.

Tangipahoa River
Tangipahoa Parish
Photo by Bob Dennie

APRIL 1993

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
MARCH 1993 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	MAY 1993 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31			*April Fool's Day* *Striped bass spawn at Toledo Bend Hatchery.* *Frog season closes.* 1	*Redear sunfish move to shallow waters.* 2	*Louisiana state wild flower, giant blue iris, blossoms in coastal Louisiana.* 3
Psalm Sunday *Daylight Saving Time begins.* 4	*Rare Swallow-tailed Kites return to the Pearl River basin to nest.* 5	*Passover* *Full moon* 6	*Gulf sturgeon spawn in major rivers.* *Start weed control measures in farm ponds.* 7	*Peak ingress of brown shrimp post larvae into Calcasieu Lake.* 8	*Good Friday* *Young rabbits begin to appear in thickets.* 9	*Turkey season opens in Area D.* 10
Easter 11	*Peak time for mayhaw picking.* 12	*Last quarter moon* *Coyote pups whelped.* 13	*Collect mayhaw fruit for jams and jellies.* 14	*Stock largemouth bass fingerlings.* 15	16	*Prepare brooding patches for turkeys.* 17
Purple Gallinules arrive from South and Central America to begin nesting. 18	*Alligator snapping turtles begin laying eggs.* *Commercial menhaden season opens.* 19	*Peak crappie spawn at Toledo Bend.* 20	*New moon* 21	*Earth Day* 22	*Coastal chenieres teem with migrant birds after the passage of cold fronts.* 23	24
Turkey season closes in Areas A, B, and D. 25	26	*Linear white inflorescences of virginia-willow adorn forested wetlands.* 27	28	*First quarter moon* 29	*Last day for commercial spotted seatrout fishing.* *Commercial hunting preserve season closes.* 30	

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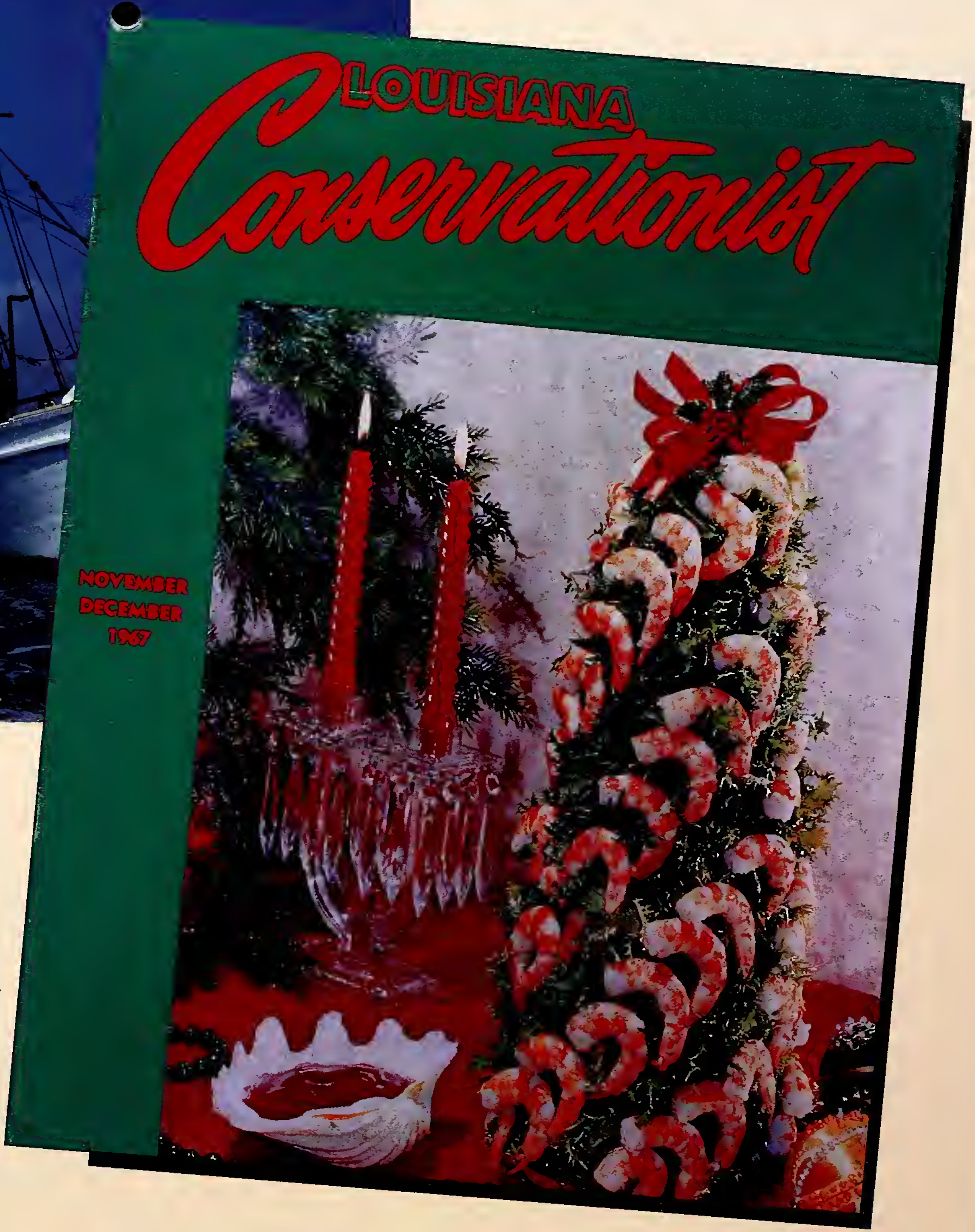

LOUISIANA
Conservationist
NOVEMBER
DECEMBER
1967

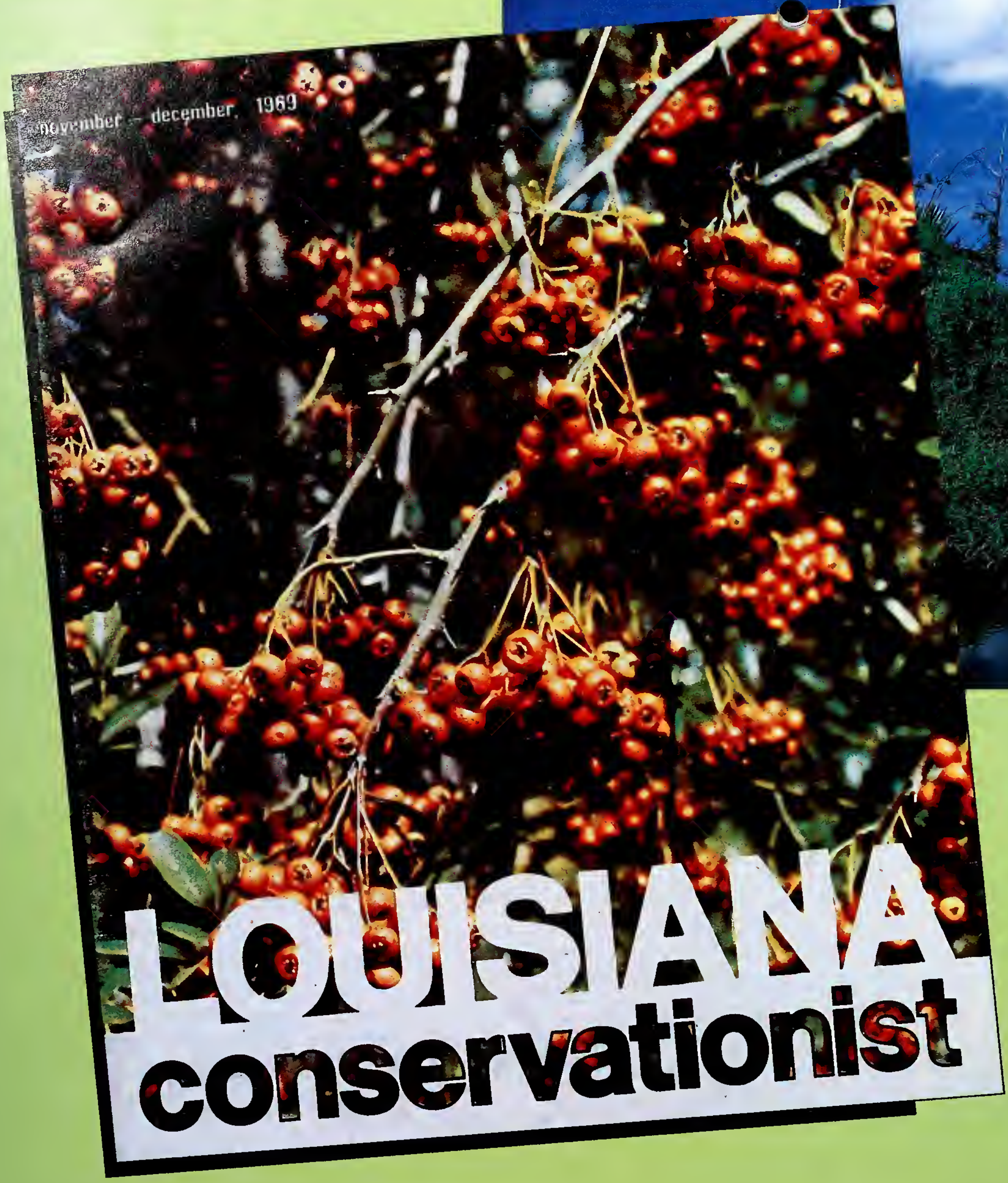
In Nov/Dec 1967, the extra line identifying the Wild Life and Fisheries Commission was dropped, but the cover of that issue carried a far more important change. It was the first issue to use a full color photograph. The holiday shrimp cocktail seemed to leap from the page when compared to the magazine's traditional black and white photography. It was a bit premature but, nonetheless, an omen.

Shrimpers off Grand Isle
Photo by Bob Dennie

MAY 1993

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
APRIL 1993 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	JUNE 1993 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30					*1993-94 hunting and fishing licenses are on sale.* *Begin issuing 1993-94 recreational gear licenses.* *Wild turkey hatch underway.* 1
Rare reddish egrets nesting on isolated barrier islands. *Bream spawning.* 2	*Brown Pelican nesting in full swing.* 3	*Light blue flowers of celestial lily evident in north Louisiana prairies.* 4	*Time to pick red mulberries.* 5	*Full moon* *Time for natural lightning - started fires.* 6	*Rare golden-wave tick seed in bloom in northwest Louisiana.* 7	8
Mother's Day 9	*Blackberries ripe for picking.* 10	*Beginning of summer long spawning of spotted seatrout.* 11	*Bream bedding at Toledo Bend.* 12	*Last quarter moon* 13	14	15
16	17	*Female gopher tortoises lay eggs in sandy pinelands of eastern Florida parish.* 18	19	*Selected lakes and rivers are stocked with striped bass.* 20	*New moon* 21	*Female Rafinesque's big-eared bats bear their single offspring.* 22
23/30	*Memorial Day (31)* 24/31	25	*Young Red-cockaded Woodpeckers leave their cavity nests.* 26	27	*First quarter moon* 28	29

Report Poachers 1-800-442-2511



The magazine surfaced at the end of 1969 with a blocky, unattractive concept which would prove to be short-lived.

Of paramont concern to the department was the lead article in the Nov/Dec 1969 issue. The opening lines of that story bespoke a tragedy.

"The brown pelican is in big trouble. For years the picturesque, sociable bird with the huge bill perched on pilings and preened on the beaches of Louisiana's coastline. It numbered well into the tens of thousands.

The brown pelican became famous, then died."

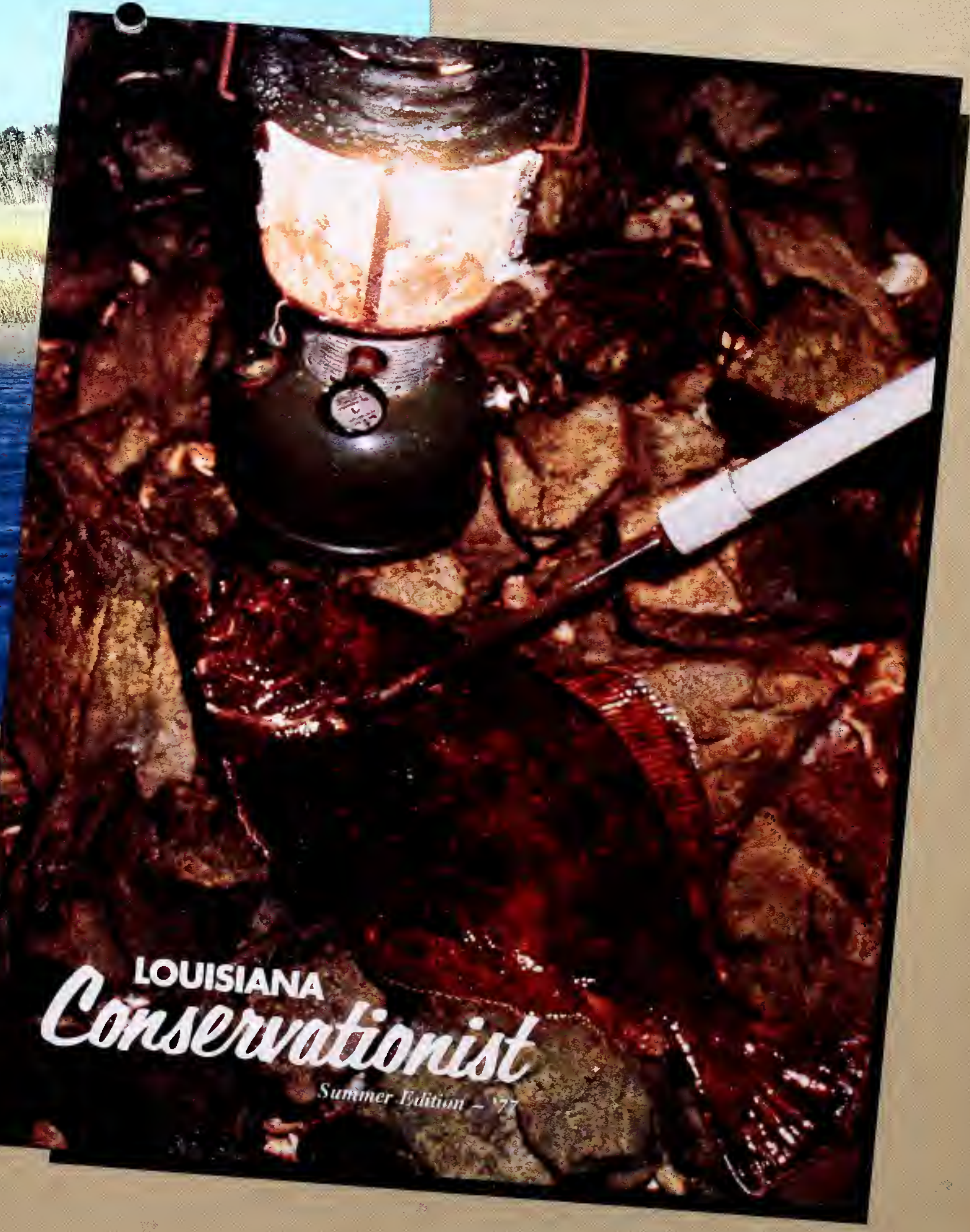
Researchers were to learn that the magnificent birds were the victims of pesticides. In 1968 the department had lauched its Pelican Restoration Program, which eventually established breeding colonies at Queen Bess Island and in the Chandeleur Islands.

Fresh Water Swamp
St. Tammany Wildlife Refuge
St. Tammany Parish
LDWF Photo

JUNE 1993

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		Statewide surveys on bird breeding conducted this month. *Frog season opens.* 1	*Mottled duck/tree duck brooding.* 2	*Peak fawn drop in upland areas.* 3	*Full moon* *US's largest tern/gull nesting frenzie on Louisiana's barrier islands.* 4	5
Boating Safety Week, June 6-12 6	*Broad-leaved spiderwort blooming on salt domes in south Louisiana.* 7	8	9	*Hybrid striped bass schooling.* *Eastern coral snakes lay eggs this month.* 10	*White shrimp post-larvae move from offshore to estuaries.* 11	*Last quarter moon* *Chanterelle mushrooms fruiting in bottomland oak forests.* 12
13	*Flag Day* *Peak bobwhite calling.* 14	*Eastern Bluebirds begin building nests again in preparation for second brood.* 15	*Peak alligator nesting.* 16	17	*Brazilian free-tailed bats give birth this month.* 18	19
Father's Day *New Moon* 20	*Summer solstice, first day of summer.* 21	*Threatened loggerhead sea turtles return to beaches of Chandeleur Islands to nest.* 22	23	*Louisiana Fishing Enhancement Act signed into effect in 1986, creating Louisiana's Artificial Reef Program.* 24	*Time to collect bay leaves from the native bay trees for wild game sauce piquantes and gumbos.* 25	*First quarter moon* 26
Threatened ringed sawback turtles laying eggs June through July in Pearl River Basin. 27	28	*Rose pogonia orchid in bloom in longleaf pine flatwood savannahs.* 29	*1992-93 hunting, fishing and recreational gear licenses expire.* 30		MAY 1993 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	JULY 1993 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Report Poachers 1-800-442-2511



The Summer edition of 1977 saw the cover redesigned once again, as the name of the department was changed once more. This time it became the Department of Wildlife and Fisheries. (Note the subtle difference between "wildlife" and the previous "wild life.") Of equal importance, an editorial in that issue by Secretary J. Burton Angelle openly discussed the rising production cost of the magazine and the shrinking departmental revenues. He concluded that subscription fees were considered and rejected, but added prophetically that such fees might become necessary at a later date. Instead, he elected to convert the magazine from a bimonthly to a quarterly publication. It remained so until 1981.

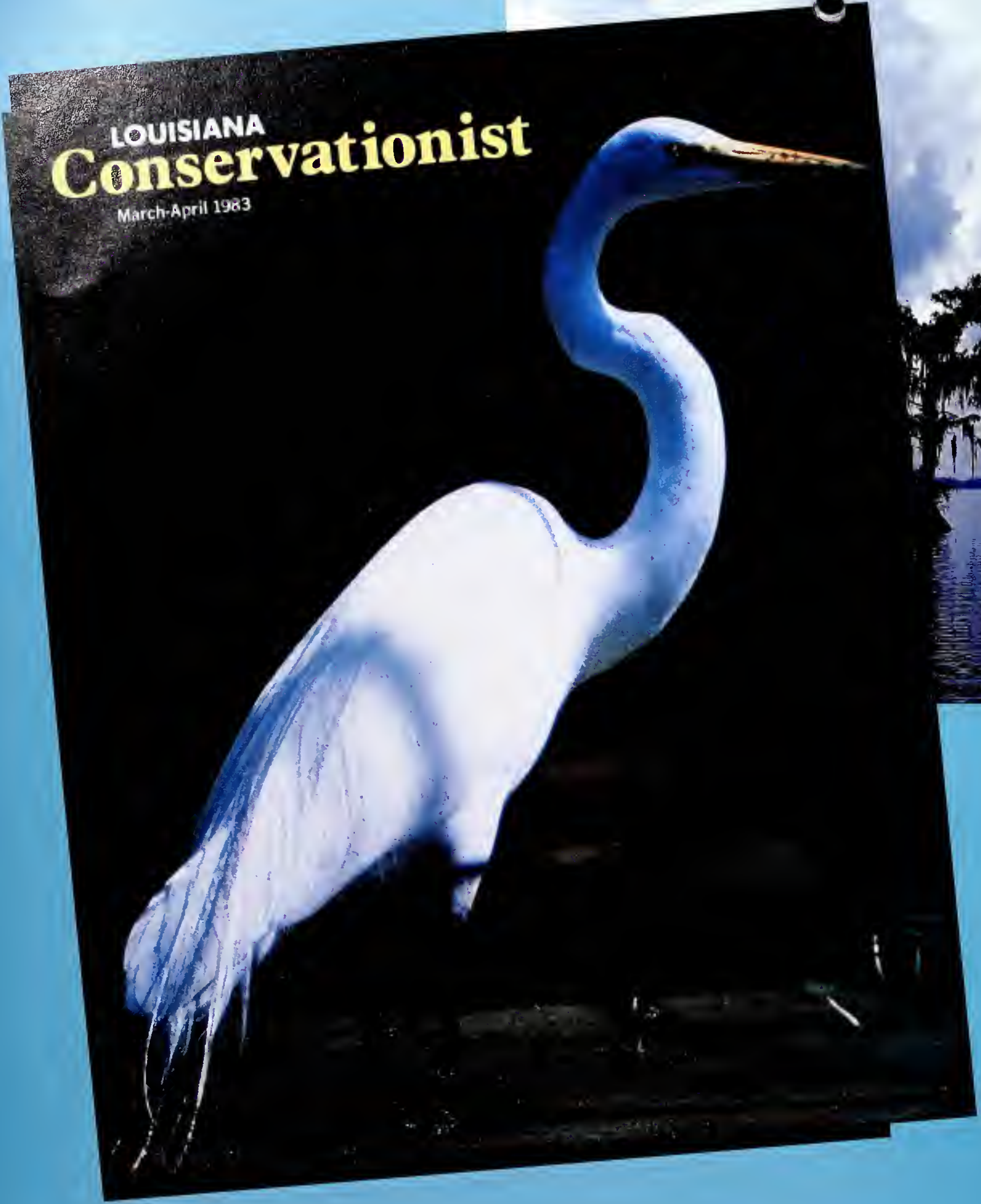
The first calendar was published one year earlier in the Jan/Feb. 1976 issue as a single page pull out adorned with a rather shaggy buck deer.

St. Bernard Parish
LDWF Photo

JULY 1993

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
JUNE 1993 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	AUGUST 1993 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31			*Time to purchase new sport licenses and recreational gear licenses.* *King mackerel fishery re-opens.* 1	*Juvenile white shrimp appearing in Louisiana estuaries.* *Large number of blue crabs along barrier island beaches.* 2	*Full moon* 3
Independence Day 4	*Pink blossoms seen on the rare bog moss in wooded seeps.* 5	6	*Largemouth bass begin to congregate into warm holes.* 7	8	9	10
Last quarter moon 11	12	13	*Brilliant orange flowers of yellow fringed orchid in moist sandy soils.* 14	15	16	*White flowers on summer azaleas appear.* 17
Peak of quail hatch begins in pinelands. 18	*New moon* 19	*Time to make file' from dried sassafras leaves for home-cooked gumbos.* 20	21	*Flood fallow rice fields to three inches in preparation for fall migration of shore birds.* 22	23	24
25	*First quarter moon* 26	27	28	29	30	31

Report Poachers 1-800-442-2511



LOUISIANA
Conservationist
March-April 1983

The March/April 1983 issue bore the cover design carried by the *Louisiana Conservationist* up to the present. In 1988, Governor Buddy Roemer eliminated the budget for the *Louisiana Conservationist*. Rather than discontinue publication, the magazine went to paid subscriptions beginning with the Jan/Feb issue of 1989. Circulation dropped from more than 200,000 to slightly over 40,000, but the magazine survived.

Today's glossy, full color magazine is, technically, light years removed from its origins. The mission, however, remains unchanged. The 70 year old flagship of the Department of Wildlife and Fisheries still has as its primary mission "...to carry the story of what the Department...is doing to conserve and replenish nature's bountiful gifts to the Pelican State..." to the people of Louisiana.

St. Martin Parish
Photo by Bob Dennie

AUGUST 1993

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	*Full moon* 2	3	4	*Rare insect-eating spoon-leaved sundew in flower in savannahs and bogs.* 5	6	*Shore and wading birds congregate at Catahoula Lake.* 7
Large numbers of Ruby-throated Hummingbirds pass through Louisiana enroute to Central America. 8	*Bluegill begin to school again.* 9	*Last quarter moon* 10	*Get lanterns and gigs ready for flounders now on mud flats and in shallows.* 11	12	*First blue-winged teal and pintail begin appearing in coastal areas.* 13	14
15	*Appearance of pink and orange fruits of strawberry bush. Known as "deer ice-cream".* 16	*New moon* *Work retrievers to get in shape for dove season.* 17	*Blue Wing Teal begin congregating on Catahoula Lake.* 18	19	*Bull redfish begin congregating near tidal passes.* 20	*Best largemouth bass fishing at night at Toledo Bend.* 21
Family groups of swallow-tailed kites can be observed soaring over Pearl and Atchafalaya river basins. 22	*Pigmy rattlesnakes give birth this month.* 23	*First quarter moon* *Begin preparation for alligator season.* 24	*Delicious muscadine grapes ripen in forests throughout the state.* 25	26	27	*Purple Martins congregate in large flocks prior to migration south.* 28
29	*Endangered manatee wanders into Louisiana waters during late summer.* 30	31			JULY 1993 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	SEPTEMBER 1993 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13. 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

ATTENTION BASS FISHERMEN

Photo by Bob Dennie

La. Dept. of Wildlife and Fisheries

NEW BASS MANAGEMENT PLAN

EFFECTIVE NOVEMBER 20, 1991

STATEWIDE

10 FISH DAILY TAKE/AND POSSESSION LIMIT WHILE ON THE WATER

NO SIZE OR SLOT RESTRICTIONS

EXCEPTIONS FOR CERTAIN AREAS

TROPHY LAKES

8 FISH DAILY TAKE/AND POSSESSION LIMIT WHILE ON THE WATER

15-19 IN. SLOT LIMIT WITH ONLY 2 FISH ALLOWED OVER 19 INCHES

FALSE RIVER *(POINTE COUPEE PARISH)*

QUALITY LAKES

8 FISH DAILY TAKE/AND POSSESSION LIMIT WHILE ON THE WATER
14-17 IN. SLOT WITH ONLY 4 FISH ALLOWED OVER 17 INCHES
LAKE BARTHOLOMEW *(MOREHOUSE PARISH)*
BLACK BAYOU LAKE *(BOSSIER PARISH)*
CHICOT LAKE *(EVANGELINE PARISH)*
LAKE RODEMACHER *(RAPIDES PARISH)*
CANEY LAKE *(JACKSON PARISH)*
VERNON LAKE *(VERNON PARISH)*
CROSS LAKE *(CADDO PARISH)*

EFFECTIVE MAY 1, 1991

Louisiana/Texas Sportsfishing Reciprocal Agreement

TOLEDO BEND AND CADDO LAKES

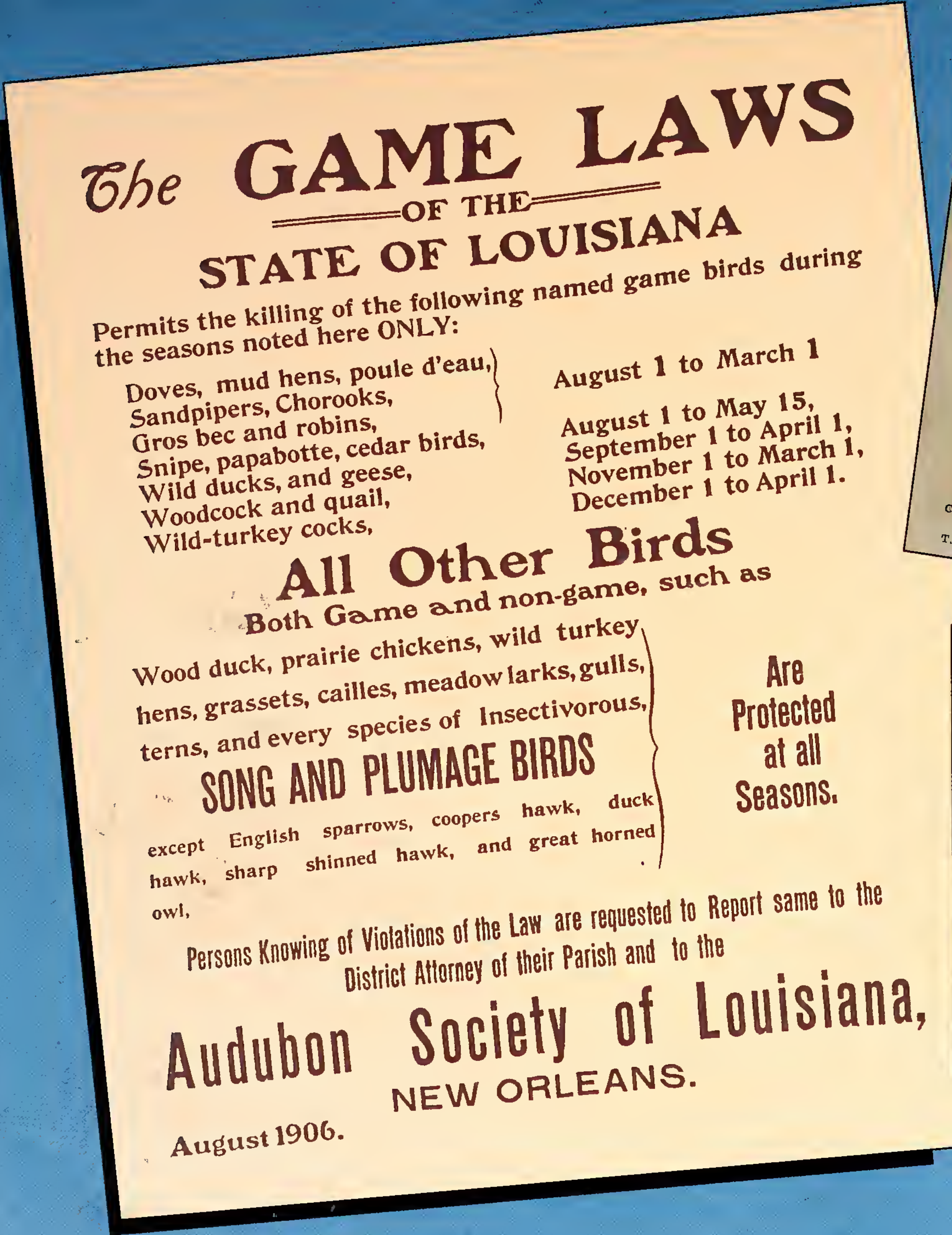
8 FISH DAILY TAKE
14 INCH MINIMUM LENGTH

SABINE RIVER

SAME AS STATEWIDE

NOTE: *POSSESSION LIMIT IS TWICE DAILY TAKE OFF THE WATER.*
SLOT LIMIT *MEANS THAT IT IS ILLEGAL TO KEEP OR POSSESS A BLACK BASS WHOSE MAXIMUM TOTAL LENGTH IS BETWEEN THE DESIGNATED MEASUREMENTS, STATED LENGTHS INCLUSIVE.*

Conservation Documents of the Past



The GAME LAWS
OF THE
STATE OF LOUISIANA

Permits the killing of the following named game birds during the seasons noted here ONLY:

Doves, mud hens, poule d'eau, Sandpipers, Chorooks,	August 1 to March 1
Gros bec and robins,	
Snipe, papabotte, cedar birds,	August 1 to May 15,
Wild ducks, and geese,	September 1 to April 1,
Woodcock and quail,	November 1 to March 1,
Wild-turkey cocks,	December 1 to April 1.

All Other Birds

Both Game and non-game, such as

Wood duck, prairie chickens, wild turkey hens, grassets, cailles, meadow larks, gulls, terns, and every species of Insectivorous,

SONG AND PLUMAGE BIRDS

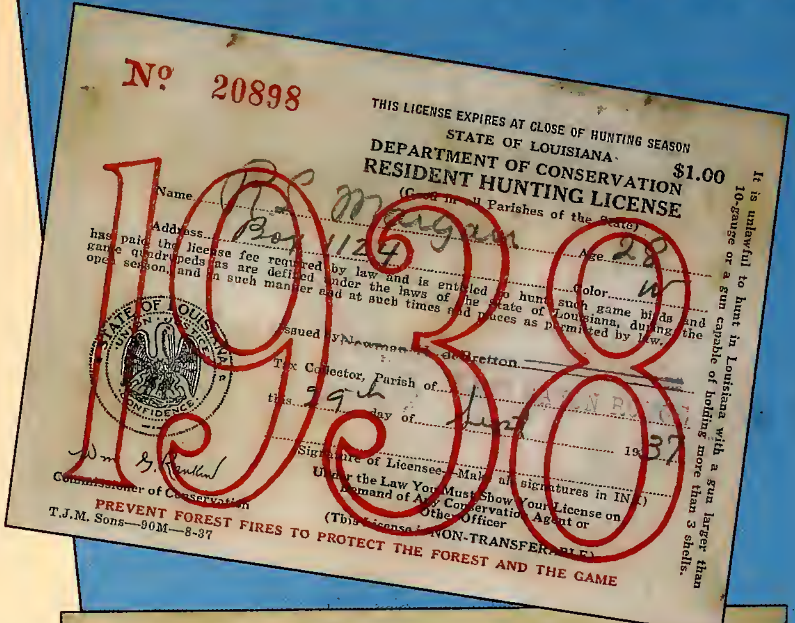
except English sparrows, coopers hawk, duck hawk, sharp shinned hawk, and great horned owl,

Are Protected at all Seasons.

Persons Knowing of Violations of the Law are requested to Report same to the District Attorney of their Parish and to the

Audubon Society of Louisiana,
NEW ORLEANS.

August 1906.



№ 20898

THIS LICENSE EXPIRES AT CLOSE OF HUNTING SEASON

STATE OF LOUISIANA

DEPARTMENT OF CONSERVATION

RESIDENT HUNTING LICENSE $1.00

(Good in all Parishes of the State)

1938

Name R L Morgan

Address Box 1124 Age 28

Color W

has paid the license fee required by law and is entitled to hunt such game birds and game quadrupeds as are defined under the laws of the State of Louisiana, during the open season, and in such manner and at such times and places as permitted by law.

Issued by Newman ... Bretton

Tax Collector, Parish of

this 29th day of June 1937

Signature of Licensee—Make all signatures in INK)

Wm G. Rankin

Commissioner of Conservation

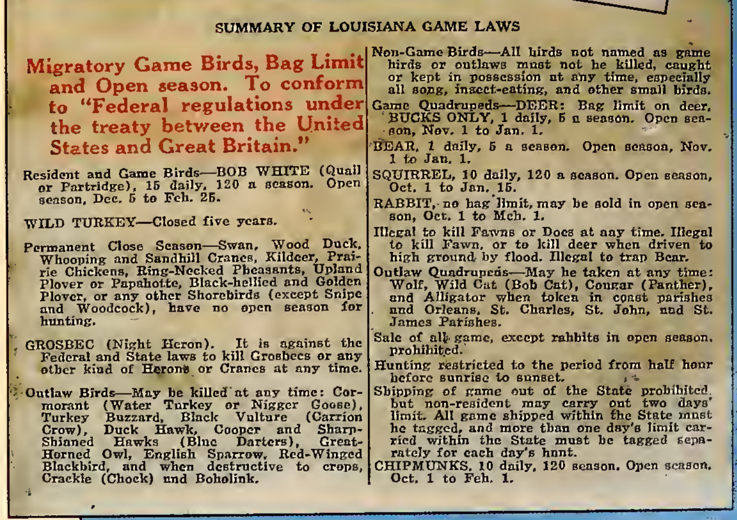
Under the Law You Must Show Your License on Demand of Any Conservation Agent or Other Officer

(This License is NON-TRANSFERABLE)

PREVENT FOREST FIRES TO PROTECT THE FOREST AND THE GAME

T.J.M. Sons—90M—8-37

It is unlawful to hunt in Louisiana with a gun larger than 10-gauge or a gun capable of holding more than 3 shells.



SUMMARY OF LOUISIANA GAME LAWS

Migratory Game Birds, Bag Limit and Open season. To conform to "Federal regulations under the treaty between the United States and Great Britain."

Resident and Game Birds—BOB WHITE (Quail or Partridge), 15 daily, 120 a season. Open season, Dec. 5 to Feb. 25.

WILD TURKEY—Closed five years.

Permanent Close Season—Swan, Wood Duck, Whooping and Sandhill Cranes, Kildeer, Prairie Chickens, Ring-Necked Pheasants, Upland Plover or Papabotte, Black-bellied and Golden Plover, or any other Shorebirds (except Snipe and Woodcock), have no open season for hunting.

GROSBEC (Night Heron). It is against the Federal and State laws to kill Grosbecs or any other kind of Herons or Cranes at any time.

Outlaw Birds—May be killed at any time: Cormorant (Water Turkey or Nigger Goose), Turkey Buzzard, Black Vulture (Carrion Crow), Duck Hawk, Cooper and Sharp-Shinned Hawks (Blue Darters), Great-Horned Owl, English Sparrow, Red-Winged Blackbird, and when destructive to crops, Crackle (Chock) and Bobolink.

Non-Game Birds—All birds not named as game birds or outlaws must not be killed, caught or kept in possession at any time, especially all song, insect-eating, and other small birds.

Game Quadrupeds—DEER: Bag limit on deer, BUCKS ONLY, 1 daily, 5 a season. Open season, Nov. 1 to Jan. 1.

BEAR, 1 daily, 5 a season. Open season, Nov. 1 to Jan. 1.

SQUIRREL, 10 daily, 120 a season. Open season, Oct. 1 to Jan. 15.

RABBIT, no bag limit, may be sold in open season, Oct. 1 to Mch. 1.

Illegal to kill Fawns or Does at any time. Illegal to kill Fawn, or to kill deer when driven to high ground by flood. Illegal to trap Bear.

Outlaw Quadrupeds—May be taken at any time: Wolf, Wild Cat (Bob Cat), Cougar (Panther), and Alligator when taken in coast parishes and Orleans, St. Charles, St. John, and St. James Parishes.

Sale of all game, except rabbits in open season, prohibited.

Hunting restricted to the period from half hour before sunrise to sunset.

Shipping of game out of the State prohibited but non-resident may carry out two days' limit. All game shipped within the State must be tagged, and more than one day's limit carried within the State must be tagged separately for each day's hunt.

CHIPMUNKS, 10 daily, 120 season. Open season, Oct. 1 to Feb. 1.